"THE ECONOMIC CAUSES AND CONSEQUENCES OF LABOUR MIGRATION FROM THE SUDAN: AN EMPIRICAL INVESTIGATION"

By

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ABBREVIATED CONTENTS

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ABSTRACT

The aim of this study is to investigate, examine, and establish the nature and process of labour migration from the Sudan for work in other countries, as well as to assess the causes of this labour movement, and its implications for the economy of the Sudan, the individual migrant, and non-migrant.

Sudanese migration is basically to the Arab oil producing and exporting countries, and it is relatively recent. Although this migration is highly selective, it involves different types of labour; unskilled, skilled, highly skilled as well as employed and unemployed labour.

This study has shown that the 'pull' factors of migration exerted more pressure on the movement of labour than the 'push' factors prevailing in the Sudan. The increased demand for labour in the oil countries resulted in higher earnings in these countries relative to those in the Sudan. Income differentials between the Sudan and immigration countries, as well as fluctuations in the level of gross domestic investment in these countries are the most significant variables in explaining migration from the Sudan.

The effects of this migration on the economy of the Sudan are not entirely positive. The country has been able to export some of its unemployed labour force and gain some foreign exchange through migrants' remittances. However, because of the rapidly increasing migration rate and the skill composition of migrants, significant labour shortages could occur to the

extent of considerable output losses, if migration continued at the present rate and composition. The individual migrant and his family at home, however, are able to derive substantial monetary gains as a result of this migration.

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ABBREVIATIONS

AOPEC	Arab Oil Producing and Exporting Countries.
API	Arab Planning Institute, Kuwait.
CUP	Cambridge University Press.
DSRC	Development Studies and Research Centre, Faculty of Economics and Social Studies, University of Khartoum.
ECWA	United Nations, Economic Commission for Western Asia.
ESRC	Economic and Social Research Council, Khartoum.
IILS	International Institute for Labour Studies, Geneva.
ILO	International Labour Organization.
ILR	International Labour Review.
IMF	International Monetary Fund.
IMR	International Migration Review.
JASPA	Jobs and Skill Programme for Africa, ILO.
JECS	Jobs Evaluation and Classification Scheme, 1978.
JPE	Journal of Political Economy.
MENA	Middle East and North Africa.
MIT	Massachussetts Institute of Technology.
OECD	Organization for Economic Co-operation and Development.
OEP	Oxford Economic Papers.
OUP	Oxford University Press.
SA	Saudi Arabia.
SSU	Sudanese Socialist Union, Khartoum.
UAE	United Arab Emerates.
YAR	Yemen Arab Republic (North Yemen).
YPDR	People's Democratic Republic of Yemen (South Yemen).

KD	Kuwaiti Dinar.
LD	Libyan Dinar.
£S	Sudanese Pound.
SR	Saudi Riyal.
US$	United States Dollar.

CHAPTER ONE

INTRODUCTION

1.1: Purpose and scope of the study

The drastic increase in the international prices of oil in the early 1970s has brought many effects on the World economy. The analysis in this area, however, has been focused mainly on the adverse effects of the oil price rise on the advanced industrial countries, and the enormous accumulation of foreign exchange and reserves by the oil exporting countries themselves. The implications for the non-oil producing developing countries has received very little attention so far. The intention of this study is to analyse such implications, by focusing on one important aspect brought about by this oil price boom. In the countries of MENA, one of the changes brought about by the oil price boom, is the movement of labour from the non-oil to the oil producing and exporting countries in the region. Some countries in the region suddenly found themselves exporting labour to other countries in rapidly increasing magnitudes. Thus, the non-oil countries in the region did not only suffer a burden on their balance of payments as a result of this oil price rise, but were also subject to an outflow of their manpower. This labour outflow raises very important issues, namely what are the main causes of this labour movement, and how is it harmful or beneficial to the labour exporting countries in the region? This study attempts to analyse such issues, referring particularly to the experience of Sudanese migration for work abroad.

International migration of labour is liable to have implications for the individual, different social classes, and the economy or society in general, both in the country sending labour abroad (emigration, home, origin, or sending country) and the country receiving these migrant labour (immigration, host, destination, or receiving country). These impacts, however, would depend on many factors, among which is whether migration is permanent, temporary or seasonal. Migration is defined as permanent, temporary or seasonal depending on the legal status of migrants and the length of migration. Generally, temporary migration refers to workers who are recruited to work abroad for a specific period of time after which they are supposed to return to their home countries. Usually this period of migration is in years, and thus differs from seasonal migration which takes place during a certain season of the year. It differs from permanent migration in the sense that, the latter type of migration refers to migrants who settle abroad permanently. The net effects of labour migration, however, may be either beneficial or detrimental to the economy of the sending country and its development process; and in any particular case a detailed assessment of the consequences of migration and its motives is essential before deciding whether the outflow is excessive or not. The major objective of this study is to analyse the causes of labour migration and its implications for the economy of an underdeveloped country whose labour is migrating for work in other underdeveloped countries. That is to say, the emphasis is put on the implications for the

economy of the country of emigration. While it is not claimed that the statistical techniques employed in this study represent radical innovation, it is the application of these to labour migration among MENA countries that represent the major contribution of the study.

Recently, and especially in the 1970s, the Sudan has been subject to high migration rates of its manpower to work abroad, especially in the oil producing and exporting countries of MENA. Although the extent and magnitude of this labour outflow itself is in question, the official statistics indicate that the number of official migrants, for example, in 1978/79 was more than 25 times higher than that in 1973/74. This migration, moreover, seems to involve different types of labour - skilled, semi-skilled, unskilled, as well as employed and unemployed labour. This problem of labour migration from The Sudan has become one of the major policy issues in the country. The analysis of labour mobility in the country so far, however, has centred around internal migration, especially migration from rural areas to Khartoum, the capital city(1). International migration, its causes, implications for the economy and the individual migrant and non-migrant as well as its implications for the economic development process of the country, has so far, received very little attention. A comprehensive strategy for the economic growth of the country proposed by the ILO as recently as 1974 does not take this phenomenon of labour migration into consideration(2). Nor does the six-year plan of economic development for the period 1977/78 - 1982/83(3).

The few studies which were undertaken recently, seem to suffer from the lack of data. A.A. Ali (1976), for example, analysing the migration of academic staff from the University of Khartoum to Kuwait concludes that[4]:

> "...The migration of professionals to Kuwait is highly profitable for the individual, but may or may not be profitable from a social point of view". P.17.

His indecision seems to be rooted, apart from the narrow scope of his study, in the lack of data.

It is thus the concern of this study to make a comprehensive attempt to explore, investigate and critically examine this phenomenon of labour out-migration from the Sudan. In doing so, the study aims at three major goals. Firstly to establish the nature, process and the extent of Sudanese migration for work abroad. Secondly, the study attempts to explain and examine the various causes and forces of this labour migration from the country. Thirdly, the study attempts to examine and critically evaluate the implications and consequences of this phenomenon for the economy of the country, as well as for the individual migrant and non-migrant, and the process of economic development of the country. It is only by careful empirical investigation of these issues, that sound economic policies towards migration could be developed.

Although the study is meant to be as complete and comprehensive as possible, its scope is largely limited by the availability of data. Only recent migration, since the independence of The Sudan in 1956 is covered in this study. However, as will be seen later in Chapter Two, it is not only

that early migration from The Sudan does not seem to exist, but significant migration seems to be very recent, and only took high magnitudes in the late 1970s. It is not only that the oil price boom itself is of a recent occurrence, but also the study has to cope with inadequate and sometimes complete absence of data, information and references. Therefore most of the analysis is confined to the 1970s. Moreover, it seems that Sudanese migration is basically to AOPEC, and therefore most of the analysis refers to this migration. However, since the study is meant to be complete and its main concern is with the economy at large, the study takes all types of labour - highly skilled, skilled and unskilled - into consideration. Moreover, as is seen later, migration from The Sudan seems to be a migration of workers rather than family migration, and thus the study largely concentrates on the migration of workers or those counted as in the labour force. The analysis in this study is based on data from various sources. These include published and unpublished data collected from different departments of Sudan Government, as well as other national, international and other sources of data. To supplement the data from these sources, however, a survey among the Sudanese migrants was undertaken by the author.

1.2: Plan of the study

In pursuing the three aims of this study, the study is divided into five main parts, apart from this introductory chapter. Part One, which include Chapters Two and Three is meant as a background to the study. It is impossible to

analyse the causes and consequences of labour migration without knowing the history, nature, process and magnitude of this migration. Thus Chapter Two, dealing with patterns of Sudanese migration, sets out to investigate the history, process and trends of this outflow. It is also impossible to analyse the effects and motives of migration without specifying the conditions existing in the economy at the time of migration. Chapter Three, then, sets out to examine and critically explain the situation of the labour market in The Sudan. Such an examination would help to assess the future supply and demand for labour in the country, and thus surpluses and shortages of labour.

In order to analyse the causes and implications of labour migration more fully, it is essential to know what type of labour is largely involved in the migration process, for example, is it largely the skilled or the unskilled labour who migrate? Part Two which includes Chapters Four and Five is set out to investigate the socio-economic characteristics of migrants. Because of lack of data, especially in this respect, a survey was undertaken by the author among the Sudanese migrants in SA in April/May 1980. It is hoped that such a survey would not only reflect these characteristics of migrants, but also other aspects related to the phenomenon of labour migration. Chapter Four describes how this survey was planned and carried out. In Chapter Five, we attempt to establish the socio-economic and demographic characteristics of migrants from The Sudan. This would help to identify the

type of labour that mostly participates in the migration process and compare their characteristics to the indigenous economically active population of The Sudan.

Part Three, comprising Chapters Six, Seven and Eight attempts to analyse the effects of migration on the Sudanese economy. It would be impossible to obtain an exact quantitative estimate of the effects of migration on the economy, without constructing a complex and somewhat unrealistic model of the economy. Even if such a model was developed, it would not be possible to apply such a model to the Sudanese economy because of lack of data. It would be equally futile to attempt a proper cost-benefit analysis, for the same reasons of data absence. Therefore, instead, the approach followed in this study is to examine the impact of migration on several macro-economic variables that are likely to affect the economy in general. However, to do so, one needs to establish the possible effects of migration. Chapter Six, then, while reviewing the existing literature on the implications of migration for the labour sending country's economy, presents a general discussion of these implications to identify such variables. Chapter Seven, empirically investigates the effects of Sudanese migration on these variables. It is generally hoped that remittances of migrants from abroad could provide foreign currency for the country, and therefore concentrated efforts have been made by the government to attract these remittances, without much attention to other aspects of remittances and migration. The net impact of remittances, however, usually involves a set of basically

empirical questions, which Chapter Eight attempts to investigate and answer.

Part Four deals with the motives of this labour migration. This part includes Chapter Nine, which reviews the existing theoretical and empirical approaches to the study of causes of labour mobility. In Chapter Ten, a simple model is developed to test the causes of migration from The Sudan. It is hypothesised that, although the economic conditions in The Sudan might have caused labour migration from the country, yet it was the conditions of the economies of AOPEC and the increased demand for labour in these countries which exerted the most pressure on labour movements. In this Chapter, this model is estimated to examine the causes of migration from The Sudan.

Finally in the last part of the study, in Chapter Eleven, the main findings of this inquiry are presented, along with recommendations of some policies to deal with the problem of labour migration from the country.

Notes to Chapter One:

(1) See, for example, M.E. Galaleldin (1973) "Internal migration in The Sudan since World War II; with special reference to migration to Greater Khartoum". Unpublished Ph.D. Thesis, University of London 1973. Also, ILO (1976) "Growth, employment and equity: A comprehensive strategy for the Sudan" ILO, 1976; and A.S. Obrai (1977) "Migration, unemployment and the urban labour market: A case study of The Sudan" ILR, Vol. 115, No.2, March/April 1977; and

A.S. Obrai (1975) "An analysis of migration to Greater Khartoum (Sudan)" World Employment Programme Research, Population and Employment working paper No.19, July 1975, ILO, Geneva.

(2) ILO (1976) "Growth, employment and equity: A comprehensive strategy for The Sudan" ILO, 1976, Geneva.

(3) Ministry of National Planning "The six-year plan for social and economic development, 1977/78 - 1982/83" vols. I and II, Khartoum, 1977.

(4) A.A. Ali (1976) "A note on the brain drain in The Sudan" ESRC, Khartoum, Dec. 1976.

CHAPTER TWO

PATTERNS OF MIGRATION

2.1: Introduction

It is the main concern of this chapter to analyse and indicate the main trends in Sudanese migration for work abroad. This will enable us to clarify the phenomenon and advance hypotheses for the future course of the study. The available documentary information is analysed in more detail in this chapter to give some indication of this pattern. As a background to discussing the main trends in Sudanese migration abroad, international migration in MENA is discussed in Section 2 of the chapter. This is mainly to reflect the economic differences between MENA countries. This section was necessitated by the observation that Sudanese migration is mainly to the oil-producing countries of MENA. The remainder of the chapter presents the available documentary information about migration from The Sudan, and reviews existing studies in this respect. Thus, Section 3 deals with the historical and recent trends in Sudanese emigration. In Section 4, the main destinations of Sudanese emigrants are discussed. In Section 5, migration channels are discussed and examined. In view of the serious underestimation of migrants by the documentary information, an estimate of total Sudanese migrants abroad is provided in Section 6. In the last section a summary and some conclusions are presented.

2.2: On inter-Arab migration

The discovery of oil in MENA is said to be the most important economic event in Arab economic history. This has led to countries of MENA being classified according to whether they produce and export oil or not. In some cases,

these countries are classified as being "capital-rich" and "capital-poor" countries according to their oil wealth[1]. According to Aliboni (1979)[2], however, today in MENA, there exist countries whose economy and finances are founded exclusively on oil, like Kuwait, Libya, SA, UAE and other Gulf states of Bahrain, Qatar and Oman. There are other countries, such as Egypt, Jordan, Morrocco, Sudan and Tunisia, with little or no oil wealth but with other resources, notably in agriculture. There are countries which are major oil producers but which have other important agricultural resources, such as Algeria and Iraq. Finally there are countries such as YAR and YPDR which seem to be completely lacking in resources. However, in spite of the oil discovery in some of these countries as early as the 1930s, its export did not start until the late 1940s, after the Second World War[3] During the 1950s, oil revenues, although rising fast, were still modest, and only in some countries, like Iraq, the government started to get a 50% share of the oil revenue. Thus it was only in the 1960s, when oil revenues had accrued for some time and had begun increasing more rapidly, that the economic development of these oil producing countries began to take shape. At first this was at a relatively gentle pace, through the provision of social services and physical infra-structure. It was in the late 1960s that these countries began to realise the oil revenues and undertake proper economic planning for the purpose of economic development[4].

It was the 1973/74 oil price rise, which allowed these AOPEC to accumulate huge amounts of revenue and undertake large investments, thus transforming the pace and scale of their development in the 1970s. In Saudi Arabia for example, oil revenues shot up from US$ 1214 million in 1970 to US$ 4340 million in 1973 and US$ 22573 million in 1974(5), that is 19 times greater in 1974 than in 1970. Such revenues allowed huge increases in development expenditure. The first 5-year plan of economic development in Saudi Arabia (1970-75), was 'a modest' programme costing SR 56,223 million. The second plan (1975-80), and after the oil price rise of 1973/74, provided for expenditure of about SR 498,230 million, or nearly 9 times greater than the first plan. The third plan (1980-85), provided for yet more expenditure of SR 782,000 million(6), i.e. nearly twice the second and fourteen times the first plan. Other AOPEC members are no different from Saudi Arabia in accruing huge amounts of revenue and spending considerably on development. In Libya, for example, the 1975 development budget of LD 1.15 billion was more than seven times greater than the amount spent for that purpose in 1970(7).

Oil revenues not only allowed the AOPEC countries to undertake huge development expenditure, but also brought marked differences among countries of the region. Table A1, in Appendix A, shows some economic indicators of MENA countries. The wide variation among these countries could easily be seen from the table. The table indicates that the oil countries enjoy a higher GNP per capita than non-oil

countries. Although lack of oil automatically places the country among those with lower GNP per capita, yet population size is also important in this respect. For example, Saudi Arabia although having the highest GNP, has a lower GNP per capita than Kuwait, Qatar and UAE because it has higher population. Sudan among non-oil countries, although having a higher GNP than the two Yemens, has a lower GNP per capita because of its population size. Nevertheless, oil seems to be a dominant factor in placing a country among the higher or lower GNP per capita groups. Moreover, oil countries not only enjoy higher GNP per capita than non-oil countries, but also higher growth rates in this per capita GNP. The growth rate in GNP per capita in 1970-77 in non-oil countries has been very modest compared to that in oil producing countries. Population on the other hand, had higher growth rates in 1970-79 in the oil than in the non-oil countries. Although the high growth rates in GNP per capita in the oil countries could be attributed to the increased oil revenues, especially after 1973/74, the high population growth rates in these countries might be attributed to immigration into them. The table, furthermore, shows that, with the exception of Algeria, all oil countries have large trade surpluses. This surplus increased sharply in the late 1970s. On the other hand, all non-oil countries witnessed deficit trade balances for the whole decade, which continued to worsen each year. Such surpluses enabled the oil countries to undertake huge amounts of investment. It could be seen from the table that the highest growth rate in gross domestic investment was in the

oil producing countries. The real growth rate in gross domestic investment for the period 1965-77 in AOPEC was estimated at about 20.7% per annum, compared to 9.3% and 3.9% during the same period for all developing countries and industrialized countries respectively(8). These huge investment programmes required labour which is not available domestically in these countries, and thus attracted migrant labour. In this way it is perfectly understandable that labour migration should have been established between the oil producing countries and those lacking oil. Moreover, because of the common language, religion, culture, etc., inter-Arab migration would be much easier than Arab migration to countries outside the region. Because of this, inter-Arab migration could be dated back in history. However, because of the recent accumulation of oil revenues and the recent development expenditure, inter-Arab migration seems to be very recent, or as put by Bouhdiba (1979):

> "Paradoxically inter-Arab migration has ancient origins and yet is very recent".(9)

However, despite the importance of oil as a revenue source for the governments in these countries, yet it was the construction sector, services, trade and other sectors which provided employment for both nationals and migrants in AOPEC. In Kuwait, for example, according to its 1975 population census, out of employed persons of 298415, the services sector provided employment for 53.7% (about 46.1% of the immigrants and 72.3% of the nationals), the trade sector provided employment for 13.3%, the construction sector 10.8%, while the oil sector provided employment for only 1.6% (1.5% of

migrants and 2.0% of nationals)[10]. The same features of employment seem to exist in other oil producing countries. For example, the oil sector is said to employ 1.3% employees in Saudi Arabia (1970), 1.2% in Libya (1972), 4.0% in UAE (1968) and 0.63% in Iraq (1972)[11]. On the other hand, in 1975-76, the construction sector is said to have provided employment to nearly 42.2% of migrant labour in seven AOPEC[12].

Migration being mainly from the non-oil countries to AOPEC could easily be seen from Table A2 in Appendix A. The table shows that about 70% of immigrant labour in AOPEC in 1975 was provided by ten other Arab countries in the region. The most important labour exporters seem to be Egypt, YAR and Jordan. These are followed by YPDR, Syria and The Sudan. The Maghreb countries of North Africa (Morocco and Tunisia) provide the least immigrants to the region and noticeably to neighbouring Libya. These two countries, plus Algeria - which is not an important receiver of migrants - have noticeably large numbers of migrants in Europe, especially in France and West Germany, compared to other Arab countries, and they seem to have a long history of migration to Europe[13]. The table shows, furthermore, that nearly half of total immigrants in the region are in Saudi Arabia. Saudi Arabia is followed by Libya, UAE and Kuwait as receivers of migrants. However, Arab migration seems to be basically to Saudi Arabia and Libya (80% of all Arab migrants are in these two countries), while non-Arab migration seems to be basically to the Gulf States. This is probably because of the effect of distance on migration. Such a hypothesis is supported by the near absence of Asian migration to Libya, and the absence of

migrants from the Maghrib countries in Saudi Arabia and the Gulf States.

Migration to the AOPEC, however, seems to have increased considerably in the second half of the 1970s. In 1972/73, there were about 900,000 foreign workers in MENA, of whom about 650,000 originated in other Arab countries(14). By 1975, the figure rose to nearly two million (Table A2), i.e. an increase of 897,900 immigrants or about 99.8% increase in about three years. Although there is no concrete statistical evidence, it is quite possible to make the general statement that labour migration to the region has increased substantially since 1975. In the countries of origin, such an increase in labour emigration, although at different rates in different countries, could represent a considerable drain on the domestic labour force, with serious implications for the economies of these countries. In the remainder of this study, we attempt to assess the causes and implications of this migration for the Sudan.

2.3: Patterns of Sudanese emigration

As indicated in the above section, labour migration in MENA in general seems to have accelerated in the 1970s, after the AOPEC started to make use of their oil revenues for the purpose of economic development. Thus, it is not strange to find that Sudanese migration for employment abroad started only recently. Although Sudanese emigration was dated to the 19th century(15), that type of migration was not for work, insignificant and unrecorded. Such migration refers to migration to Saudi Arabia for the purpose

of Haj or Omra (Pilgrimage), and was not on a large scale, unlike the recent migration for employment. Therefore we are concerned here only with recent migration after 1956. Recent migration from The Sudan seems to have started with some significant numbers only in the late 1960s. In the 1960s, migration from The Sudan started by official secondment of Sudanese, especially teachers and nurses, for work in Libya, Saudi Arabia and other Gulf States. These were few in numbers and largely unrecorded. The available statistics about the number of Sudanese migrants date back only to 1968/69. Data on Sudanese migration, as is the case in many developing countries, is very difficult to find and evaluate. The available data not only suggests that the phenomenon is a recent one, but also that the pattern and numbers involved in migration are changing rapidly. Table 2.1 below gives some indication of this.

Table 2.1: The number of migrants through the labour department, Khartoum, 1968/69 - 1978/79

Year	68/69	69/70	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	Total
No.	901	425	770	446	432	364	876	1962	1856	6204	9390	23626
%(a)	-	-52.8	81.2	-42.1	-3.1	-15.7	140.7	124.0	-5.4	234.3	51.4	-

N.B.(a) % is the annual rate of change (%).

Source: Dept. of labour "annual report" different years, and "The Economic Survey" of The Ministry of Finance and National Economy, Khartoum (different years).

The number of migrants each year, as indicated by the table, seems to be very small. However, there are many indications that the statistics of the Labour Department tend to understate the number of migrants as is shown below. The table, in general, shows the rapidly increasing number of migrants, especially after the mid 1970s. The number increased by about **26** fold since 1973/74. With the relatively small urban labour market in the Sudan, such rapidly increasing migration might indicate a serious problem for the country. This, however, would depend on the nature of migration, the type of labour involved as well as labour market situations in the country and other issues to be discussed in the subsequent chapters of this study. The table, however, shows a negative rate of annual increase, especially in the early 1970s, and in 1976/77. Since data in the Table reflects official migration, this could be affected by political relations between The Sudan and the recipient countries. This would indicate that a fall in the number of migrants could be attributed to political relations rather than being an indication of an actual decline in migration, especially if we note the unstable political relations in MENA. In July 1976, for example, there was the attempted coup in The Sudan, after which political relations with Libya were completely cut off, and no official migration to Libya was allowed from The Sudan. This might explain the fall in the number of official migrants in 1976/77 as in the table. In the early 1970s, however, political relations between Sudan and Saudi Arabia as well

as other Gulf states, although not cut off, were cool, especially after the May 1969 revolution in The Sudan.

It remains to say that the figures in the above table represent the number of migrants in whose migration process the Labour Department was involved i.e. official migration. In this sense, it understates the number of migrants for the following reasons.

(1) not all types of labour necessarily go through the Labour Department.

(2) It does not include those who migrate on official secondment.

(3) It does not include those who migrate illegally or unofficially from The Sudan.

The involvement of the Labour Department in the migration process is made clearer when we discuss migration channels below (Section 2.5). However, it is important to note that the number of illegal migrants from The Sudan could be substantial and should have its weight in a region with common language, religion, culture, etc., like MENA. According to our survey among Sudanese migrants in Saudi Arabia, we estimate that the Department of Labour was involved in the migration of only about 30% of migrants in the sample (Section 2.6).

If the Department of Labour statistics have such limitations, could we find other sources about numbers of migrants? Another indication about migration from The Sudan, is the number of degrees and certificates endorsed and authorised by the Department of Education, the Labour Department,

and the Ministry of Foreign Affairs to enable issue of visas facilitating entry to another country. These are shown in Table 2.2 below:

Table 2.2: Educational documents and technical qualifications authorised by the Department of Labour, Khartoum, 1971/72 - 1975/76.

Year	1971/72	1972/73	1973/74	1974/75	1975/76	Total
No.	395	568	1921	3966	13942	20792
%	1.9	2.7	9.2	19.1	67.1	100.0

Source: Department of Labour "Annual Report 1976/77" Khartoum, 1977.

The number of documents endorsed increased considerably over the period under consideration, as indicated by the table. If all those having their documents endorsed migrated, this would clearly indicate a very rapid increase in the number of migrants over the period. However, it is not necessarily the case that every one who had his certificate endorsed had actually migrated. This is the first step towards migration, and he could fail in any subsequent step. Having endorsed his certificate, the person would start looking for a work contract either in The Sudan - at foreign countries' missions for example - or abroad, and then he would migrate, given the chance. However, it should also be noticed that these figures include only those who have endorsed their certificates. It completely ignores those who do not have a certificate i.e. it reflects skilled labour migration. However, even here, it does not include those who migrate

without endorsing their certificate. In this way, these figures also understate the numbers of migrants. However, it was widely believed that such a process of endorsing certificates encourages illegal migration from the country, and thus it was stopped in October 1976(17).

It is equally difficult to obtain information about the number of Sudanese migrants in any of the destination countries. Apart from being unreliable, such statistics are hardly released. However, the available statistics give the same indication that Sudanese migration abroad has been increasing at a rapid rate. Table 2.3 below shows residence permits issued to Sudanese in Saudi Arabia.

Table 2.3: Number of residence permits issued to Sudanese in Saudi Arabia 1973-1977.

Year	1973	1974	1975	1976	1977
No. of residence permits	2127	4343	3338	8953	15892
As % of total (a)	1.3	2.7	1.5	2.1	3.0

N.B.: (a) Residence permits issued to Sudanese as % of total permits issued to foreigners in Saudi Arabia.

Source: Kingdom of Saudi Arabia, Ministry of Finance and National Economy, Central Department of Statistics "Statistical Yearbook" Riyadh, 1978, and other years.

The table, although referring to a short period of time, clearly indicates a very high rate of change in the number of residence permits issued to Sudanese in Saudi Arabia.

Between 1973 and 1977, these permits increased by 647%, a quite considerable increase. The table, however, indicates that Sudanese migrants in Saudi Arabia make a small proportion of total immigrants to this country. Although this number is small, yet, it refers to migrants in one country, and probably has its significance for the Sudanese economy. In comparison to Table 2.1, this table shows that residence permits issued in Saudi Arabia are much higher than official emigration through the Labour Department in Sudan. Over the same period migrants through the Labour Department accounted for only 34% of total residence permits in Saudi Arabia. This might reflect the extent of illegal migration from the Sudan, and the little involvement of the Department of Labour in the migration process. However, it should be pointed out that residence permits would include wives and children as well as migrant workers, while the Labour Department statistics would refer only to migrant labour. However, given the facts that these residence permits are for migrants in Saudi Arabia only while Labour Department statistics refer to total migrants, and that immigration countries discourage families from accompanying migrants, one could attribute the difference between the two sources of statistics to migrants migrating through channels other than the Labour Department, rather than only to the effect of inclusion of dependents and families. Moreover, apart from excluding illegal migrants in Saudi Arabia in Table 2.3, it was claimed that the Saudi data usually tends to understate the number of migrants, because the government wishes to minimize the dominance of

foreign labour within total[18]. Thus again this source would tend to underestimate the total number of migrants.

2.4: Main destinations

Data on Sudanese working abroad by destination country is more difficult to obtain and evaluate. The available estimates clearly suggest that Saudi Arabia is the leading receiver of Sudanese migrants. This is not strange, since we have already seen the dominant role played by Saudi Arabia as immigrant receiver in the whole region. Table 2.4 below gives some indication about Sudanese migrants in each destination country. However, because of the nature of migration, that it is largely unrecorded and involves a large element of illegal migration, the table refers to some estimates based on different studies of migration and refers to different years. Thus, along with discussing migrants' destinations, we review these studies.

The table, based on data from different studies, shows various estimates of the number of migrants abroad. This is because, apart from referring to different years, these studies use different methods of estimation. These studies are discussed below, in the meantime, however, it is interesting to compare destination ranking of all these columns. All these studies rank Saudi Arabia and Libya as the major destinations of Sudanese migrants. More than 80% of migrants are in these two countries. Moreover, with the exception of column (1), which refers to an early date, Saudi Arabia is ranked as the major recipient of Sudanese migrants. Some 60% to 70% of migrants are estimated to be

Table 2.4: Number of Sudanese migrants abroad by destination country (different years)

Destination	1968/69 (1) No.	%	1971/72 (2) No.	%	1975 (3) No.	%	1977 (4) No.	%	1978 (5) No.	%
Bahrain	46	5.1	154		200	0.4	200	0.6	100	0.1
Iraq	14	1.5	14*		-		-		-	
Jordan	21	2.3	29		300	0.6	300	0.8	300	0.2
Kuwait	23	2.5	293		2000	4.0	2000	5.6	3500	1.9
Lebanon	9	1.0	29		300	0.6	300	0.8	500	0.3
Libya	476	53	5551**		7000	14	8000	23	20000	11
Oman	-		-		500	1.0	150	0.4	1800	1.0
Qatar	1	0.1	83		600	1.2	600	1.7	2500	1.3
S. Arabia	300	33	1666*		35000	71	22000	62	140550	75
Syria	-		13		-		-		-	
UAE	10	1.1	143*		3000	6.1	2000	5.6	12000	6.4
YAR	1	0.1	78		-		-		800	0.4
Others	3	0.3	712		500	1.0	-		4300	2.3
Total	905	100	8756		49400	100	35500	100	186350	100

Notes: (a) *as in 1970/71

(b) ** as in 1974

(c) No % is given in col. (2) because of difference in years as in note (a) and (b) above.

(d) - indicate no migrants are recorded.

(e) Columns (1) and (2) refer to the flow of migrants during the given year, while other columns refer to the stock of migrants abroad by the given year.

Sources: Column (1), Department of Labour, Khartoum, Annual Report, reflecting official migration.

Column (2), M.O. Beshir (1977)

Column (3), J.S. Birks and C.A. Sinclair (1980)

Column (4), Estimates provided by the Labour Department, Khartoum.

Column (5), M.E. Galaleldin (1979).

in Saudi Arabia. Other countries enter with varying degrees of importance, notably Kuwait, UAE and Oman.

Column (1), based on the official Department of Labour statistics, would tend to understate the number of migrants as discussed in Section 2.3 above. Moreover, unlike the other columns, this column refers to the flow of migrants, i.e. persons migrating from Sudan during 1968/69. This column, however, shows that Libya was the major receiving country for Sudanese migrants rather than Saudi Arabia. Possibly with the relatively late economic planning in Saudi Arabia, early official migration was mainly to Libya. When the Department of Labour attempts to take illegal migration into account and provide an estimate of the stock of migrants abroad, as in column (4), they produce a much higher estimate of total migrants abroad, and they rank Saudi Arabia as the major recipient of migrants. However, without their method of estimation being known, nothing very much could be said about these estimates.

Column (2), based on M.O. Beshir's study of the unemployment problem in The Sudan[19], apart from not mentioning the source of the data, numbers of migrants in different countries are not comparable because they refer to different years. For example, estimates of migrants in Saudi Arabia are for 1970/71, while those in Libya are in 1974. Such a time gap would not allow comparison, and therefore we exclude these estimates altogether.

Data in columns (3), (4) and (5) refer to the stock of migrants, and thus they are more comparable, although

they refer to different years. The three studies almost produce the same ranking of receiving countries. They differ, however, in the numbers involved in migration. Galaleldin estimates in column (5), seem to be highly inflated relative to the others. An estimate of 140,550 Sudanese migrants in Saudi Arabia alone would suggest that Sudanese migrants dominate the labour market in this country. His estimates seem to be inflated because of the high rate of illegal migration, 80%, he assumes. Moreover, these estimates include wives and children of migrants abroad. However, it is believed that these are not high enough to make all this difference in the numbers involved in migration. The problem seems to lie in the method of estimation. For example, the study takes the number of migrants in Saudi Arabia through the Labour Department as high as 22,000 in 1977, then applying an illegal migration rate of 80% and adding an estimate for migrants remaining in Saudi Arabia after the Pilgrimage in 1977, thus obtaining a high estimate of migrants in Saudi Arabia in 1978. However, the Labour Department's figure is an estimate, as in Column (4), and it is not the actual number of migrants through the Department. Thus, the wrong base of data, and the high illegal migration rate, make these estimates very dubious.

Estimates provided by Birks and Sinclair[20] in column (3), seem to be more reasonable, although they may underestimate the number of migrants. The estimate is based on official sources either in The Sudan or in the receiving countries, or both. This doubt is realized if we notice that

the projected outflow of migrants between 1975 and 1985, according to them, amounted to about 10,000 migrants. Table 2.1 above shows that official migrants through the Labour Department in 1978/79 alone amounted to nearly this number.

It is left to point out that estimates in columns (4) and (5) do not include the estimated number of migrants reported to be in Egypt. These are estimated to be about 40,000 according to column (4) and about 45,000 according to column (5). Although we do not deny the existence of Sudanese migrants in Egypt, it seems that these estimates tend to exaggerate these numbers. For example, estimates in column (5) are based on the 1960 population census of Egypt. These seem to be highly inflated, since the 1976 population census in Egypt gives the number of Sudanese in Egypt as 9,521 only(21). Even if we apply an underenumeration rate of 50% as the study in column (5) did - and there is no reason for such a high rate - the number would rise to 19,042, a much lower estimate than that provided by the study, whatever the rate of increase it takes for the population. With Egypt itself being the major labour exporter in the region (Table A2), it is more difficult to accept a high estimate for the Sudanese in Egypt.

In general, it seems that the main destinations of the Sudanese migrants are Saudi Arabia and Libya, with Saudi Arabia clearly being the major recipient of migrants. Moreover the discussion has shown how difficult it is to

obtain reliable information about Sudanese migrants in destination countries, and therefore any conclusions drawn upon such studies should be taken cautiously.

2.5: Migration channels

Migration could be regulated in either origin or destination countries or both. This section attempts to identify some of these regulations, particularly the official channels through which migrants are supposed to migrate for work.

According to regulations in The Sudan, officially migration of Sudanese to work abroad should take one of the following forms(22)

(a) Group contract: This happens when an employer from abroad or his representative approaches the Labour Department in The Sudan to employ Sudanese abroad. In this case the employer or the Labour Department would advertize for the required jobs and choose the required Labour from the applicants.

(b) Individual contracts: This happens when an individual obtains a job contract from abroad in his own way. The Labour Department approves the contract in this case and endorses it for travel abroad.

(c) Official secondment: This happens through the Department employing the worker in The Sudan, and the Labour Department has nothing to do with this.

In both (a) and (b) the worker is required to prove that, either he is unemployed, self-employed or could be released by his present employer in The Sudan, as well as other minor

conditions of good reputation, good health condition, valid passport, etc. This process, however, applies only to those who migrate with a work contract. It excludes all those who go abroad for a visit, pilgrimage, those who migrate to other countries and then to final destination, etc. A considerable number of those who leave the country with the declared purpose of study abroad, medical treatment, visit, etc. finally end up taking employment abroad, and the Labour Department would have no knowledge of them. The whole process, however, suggests that the Labour Department has little influence on the migration process. It has no say in type (c), or those who migrate through other channels. It has a little say in type (a) and very little say in type (b). In type (a), the Department has to meet the requirement of the employer abroad. Moreover, it does not seem to have a list of names, or so, from which to select migrants, but the process seems to work on the basis of a 'first come first go' system. In type (b) migration, the Department is even less effective in influencing migration, since work contracts are usually sent in the name of the potential migrant, and as long as the individual could satisfy the other minor conditions, the Department would have no objection to his travel abroad.

In the emigration countries, there is the same type of work visas[23]. There is the collective immigration of labour, or group contract, in which the number of imported workers is a minimum of 25 workers. There is also individual contracts if the number of imported labour is less than that. Rules governing immigration into destination countries seem to be

almost the same in all immigration countries. Imported workers for the government ministries and departments are recruited mainly through the government missions abroad. In the private sector, any individual employer seems to be allowed to import any amount of labour as long as he can satisfy certain conditions stated by the Labour Department in his country. In UAE, for example, any citizen could import labour on collective or individual bases as long as he submits written evidence to the Ministry of Labour and Social Affairs (in UAE), that his business justifies bringing the number and type of workers required; that he assumes responsibility for the person or persons he brings into the country; and that he would return the worker to his original country after the completion of the work contract. Moreover, regulations usually prohibit foreign workers from changing employers during the term of their contract without the consent of their original employer who imported them and the Department of Labour. Illegal migration might be encouraged by the possibility that some employers might attempt to avoid costs of importing and returning migrant workers to their countries of origin. This again might be more possible because illegal migrants usually work for lower wages than others. In practice what is important to the Labour Department in these countries is that the employer who imports labour should assume responsibility for them, a system known as "Kaffeel". As long as the migrant worker has a "Kaffeel", then he should have no problem, thus in some cases employers abroad would sell work visas to migrants. The employer in

this case would import labour, stand as 'Kaffeel' for them, and give them his consent to find employment with other employers, if the worker would pay some amount of money to him. The migrant would agree to such illegal activities in the hope that he might gain from his migration and in the fear of being deported back home if he did not obtain the consent of his 'Kaffeel' to work with other employers. Other employers would be ready to hire these workers since they can avoid the cost of importing these labour and returning them to their original countries. At the time of our survey in Saudi Arabia in April/May 1980, the price of obtaining a work visa in this way was about 6-7 thousand SR, which amounts to about £S 1500 - £S 2000 at the going exchange rate. Such activities would certainly increase the cost of migration for the individual, and could discourage migration. However, it seems that, at the initial period of migration, this cost is usually shared by relatives and friends who have already migrated. These costs are usually paid by friends and relatives abroad, and the new migrant would pay back after finding a job. This process might partly explain the dominant role of relatives and friends abroad in providing work contracts, job information and initial help for new migrants, as would be seen later in Chapter Five.

Thus, although laws regulating migration and migration channels exist both in The Sudan and in destination countries, yet there are many different channels of migration, which could allow for illegal migration. The Department of Labour in The Sudan seems to be less effective in organizing

migration from the country. This supports the points mentioned earlier that the statistics of the Labour Department understate the number of migrants.

2.6. Total number of migrants abroad by 1978/79

The discussion in the above sections, has shown the non-availability of reliable statistics about the total number of migrants from the country. In this section, we attempt to make some estimates of these. The exercise, however, would depend largely on the assumptions made about the volume of illegal migration. Making use of total migrants through the Labour Department as in Table 2.1, and some assumptions about the volume of illegal migration, we could derive an estimate of the stock of migrants abroad. Three possible estimates could be made:

(1) The Department of Labour statistics reports only those who have obtained their job contract from the employment offices in The Sudan. These make up 11% of the migrants in our sample (Table 5.6). Assuming this to hold true, the total number of migrants in Table 2.1 above would represent only 11% of total migrants abroad. Thus the total number of migrants abroad would amount to about 214,780 migrants by 1978/79. However, clearly this assumption is unrealistic since some migrants who obtain work contracts in their own way have to report to the Labour Department to endorse these work contracts, and they might be included in the statistics of the Labour Department. In this way, this estimate could work, at best, as an upper limit on the total number of migrants abroad.

(2) Another possibility is to assume that every one who migrates with a work contract should report to the Labour Department, and is therefore included in its statistics. These make 61% of migrants in the sample (Table 5.5). On this assumption then, the accumulated number of migrants abroad would amount to about 38,730. Again this assumption is unrealistic, since not all those migrating with a work contract have to go through the Labour Department, e.g. those on official secondment. This figure then, at best, could work as a lower limit on the number of migrants abroad.

(3) A more realistic estimate could be reached when we take those who migrated without a work contract, 39% of the sample. To these one should add those who have migrated on official secondment, those who obtain their work contracts from employment missions to The Sudan, or from private agencies, or other ways, or those who did not state how they obtained their work contracts. Adding all these, they make about 60% of migrants in the sample (Tables 5.5 and 5.6). To these we added 10% for understating since some migrants who have migrated illegally would be afraid to state so. This 10% assumption is arrived at, judging from the 5% who did not state how they entered Saudi Arabia, and the 5% who stated that they entered Saudi Arabia with a work contract but declined to state how they obtained it. Adding all these would suggest the number reported by the Labour Department should be only 30% of total migrants. This provides an estimate of 78,750 migrants abroad by 1978/79.

These estimates, however, should be qualified in many

respects. Firstly they do not include accompanying wives and dependents. However, since these are believed to be small in number, and do not count in the labour force, they are of little interest to our study. Secondly, these estimates are not adjusted for returning migrants. No information is available about these. However, since migration has occurred in large numbers only recently, and given the relatively long period of intended migration (Section 5.9), one would expect these to be insignificant. Nevertheless, these estimates are tentative and should be taken cautiously.

2.7: Summary and conclusions

The discussion in this chapter has shown that international labour migration in MENA is mainly from Arab countries to other Arab countries, i.e. non-Arab migrants make a small proportion of total migrants in the region. Inter-Arab migration, moreover, is basically from countries lacking oil to those producing and exporting oil. Moreover, it is noticed that, although inter-Arab migration started early, it accelerated sharply in the 1970s, especially after the oil price boom of 1973/74, which brought considerable surpluses to the oil producing countries, thus transforming their pace and scale of development and their demand for labour.

Like inter-Arab migration, the migration of Sudanese for work abroad seems to have started in the 1960s, and took high magnitudes after the mid-1970s. Most of this migration is basically to Arab countries, especially Saudi Arabia, Libya, and other Gulf states. The discussion in this chapter has shown that, like studies about migration from The Sudan,

data is seldom available about this phenomenon. The documentary information seems to be unreliable and almost useless in deriving precise conclusions. This is especially true when more detailed data about migration is sought. However, the available data not only suggest the low involvement of the Labour Department in the migration process, but also that the numbers involved in migration are rapidly increasing. The implications of such rapid migration, however, would be more fully understood, after a clear understanding of the population and the labour force and the labour market situation in the country. The next chapter deals with such issues.

Notes to Chapter Two:

(1) This term was suggested by R.E. Mabro (1975) "Employment, choice of technology and sectoral priorities" in ILO (1975) "Manpower and employment in Arab countries: some critical issues" ILO, 1975. The term is also used extensively by Birks, J.S. and C.A. Sinclair in their writings about migration in the Arab World.

(2) R. Aliboni (1979) "Arab industrialization and economic integration" Croom Helm, 1979.

(3) Detailed discussion of oil discovery and its development could be found in many books about Arab countries, for example, Y.A. Sayigh (1978) "The economics of the Arab World" Croom Helm, 1978.

(4) The first economic plan in Saudi Arabia, for example, was undertaken in 1970. In Kuwait the 1st plan was in 1967, UAE in 1968, in Libya in 1963/64, etc. Detailed account of economic planning is in Y.A. Sayigh (1978), ibid.

(5) "The Middle East and North Africa" Europa publications 1980/81. p.48.

(6) ibid

(7) "Africa Guide" 1981, World of Information.

(8) Middle East countries here are, Kuwait, Libya, Qatar, Saudi Arabia and UAE. See World Bank, annual report, 1980.

(9) A. Bouhdiba (1979) "Arab migrations" in R. Aliboni, op.cit. p.167.

(10) 1975 Kuwait census of population as in "The Middle East and North Africa" 1980/81, Table 2, p.509.

(11) F. Halliday (1977) "Migration and labour force in the oil producing states of the Middle East". Development and Change, 8, summer 1977, p.263-292.

(12) R.P. Shaw (1979) "Migration and employment in the Arab World: construction as a key policy" ILR, vol. 118, No.5, Sept./Oct. 1979, Table 2, p.592. Also Birks, J.S. and Sinclair (1980) "Building industry: the major employer of migrant labour" Financial Times Survey of Arab Construction. F.T. Tuesday Jan. 22, 1980, p.XIII.

(13) A survey of Arab migration to Europe could be found in A. Bouhdiba, op.cit and also in A. Zahlan (1979) "The Arab brain drain" Population Bulletin of ECWA, No.16, June 1979. Migration from the Maghreb countries into Europe seems to have received much attention, examples of these studies are S. Adler (1977) "International migration and dependence" Saxone House 1977; M. Benoune (1971) "Maghribian workers in France" Race and Class, Vol. XVII, No.1, 1971; and M. Trebous (1970) "Migration

and development: The case of Algeria" Development Studies Centre, OECD, Paris, 1970.

(14) A.M. Farrag (1976) "Migration between Arab Countries" in ILO 1976 "Manpower and employment in Arab countries .." op.cit.

(15) M.E.Galaleldin (1979) "External migration from the Sudan" ESRC, Khartoum, Dec. 1979 (in Arabic).

(16) M.E.Galaleldin, ibid. estimates these to be around 22.3% of migrants while A.A. Abdalla (1980) "Foreign labour in Yemen Arab Republic: The case of Sudanese migrants" ESRC, Khartoum, Feb. 1980, estimate these as low as 5% of his sample of migrants in Yemen.

(17) The Council of Minister's resolution No.93, dated 3 Oct. 1976.

(18) H. Halliday (1977),op.cit.p.24.

(19) M.O. Beshir (1977) "Educational policy and the unemployment problem in The Sudan" Monograph series No.3; Development Studies and Research Centre, University of Khartoum, 1977.

(20) J.S. Birks and C.A. Sinclair (1980) "International migration and development in the Arab region" ILO, 1980.

(21) Central Statistical Office "Population Census, 1976" Reference No. 93-15111, Sept. 1978, Table 28, p.546, Cairo, Egypt.

(22) See: The 1974 Manpower Act; The Council of Minister's resolution No.13 dated 29 August 1976, and No.93 dated 3 October 1976 respectively. Also the Department of

Labour "Annual Report 1977/78" and the Proceedings of the S.S.U. Symposium on migration in The Sudan, Khartoum, December 1978 (in Arabic).

(23) A detailed discussion of migration laws in some Arab countries could be found in George Dib (1978) "Migration and Naturalization Laws in Egypt, Syria, Jordan, Kuwait and UAE: Part I Migration Laws, and Part II: Naturalization Laws" Population Bulletin of ECWA, No.15 Aug. 1978 and No.16 June 1979 respectively.

CHAPTER THREE

LABOUR MARKET SITUATION IN THE SUDAN

3.1: Introduction

To analyse the impact of labour migration on the sending country's economy, a fair understanding of the domestic labour market conditions is essential. This chapter is an attempt to shed some light on the characteristics of the Sudanese labour market. Special attention is given to the supply of and the demand for labour, and thus shortages and surpluses of labour. The analysis, however, is largely limited by the availability of data. The first population census in The Sudan was undertaken in 1955/56. The second in 1973, a time gap which brought many changes in the population. However, the 1973 population census results themselves were officially suppressed, although the provisional results are always released. We make use of results of the two censuses, as well as relevant statistics available from other sources. In Section 2 of this chapter, labour supply is investigated. Issues relevant to this include the size and composition of the population and the labour force, the educational status of the population, immigration and emigration. Section 3 deals with the labour market characteristics, and emphasis is put on the employment structure, wages and salaries, as well as unemployment situation. Having discussed these, Section 4 deals with the demand side in the labour market. Some observations on the demand for labour and the future requirements of manpower in the country are pointed out. The chapter ends with a summary and some conclusions in Section 5.

3.2. Labour supply

Among the major factors contributing to the labour supply in a country, are the size and composition of its population and its economic activity rates; the educational status and skills of the population; immigration from abroad; and emigration to other countries. This section will give some detailed discussion of these factors in turn.

3.2.1: Population and labour force

According to the first population census of the Sudan in 1955/56, there was a population of 10,263,000 persons in the country, of whom 37% were counted as in the labour force i.e. economically active. After this, there were some surveys in the 1960s, conducted on sample survey bases(1). Although these surveys contain information on the population and the labour force, comparison between them is very difficult. Apart from the different concepts and the definition of who should be counted as a member of the labour force, comparison is further complicated because of differences in coverage and lower age limits taken to define the labour force. The 1973 population census seems to be of greater importance in providing information about the population and the labour force. This reported a population of 14,113,590 persons. On this basis, the inter-census growth rate in the population was calculated as equal to 2.14 per cent per annum; much lower than that usually used for estimation (2.8 - 3.0 per cent). However, it was widely believed that there was about 5% underenumeration in this census. Applying this, total population would amount to

14,819,270 persons. However, as far as the labour force is concerned, what is important is the age, sex, and skill composition of the population, etc. rather than only its size.

Table A3 in Appendix A shows the population by age, sex, rural and urban population according to the 1973 census. The first observation to note from the table is the high share of population under the age of 15 years. Some 45.8% of total population is under this age. This share, however, falls to 42.9% of the urban population and rises to 47.7% of the rural population. This difference might be explained by the rural-urban drift. The second observation is that the population is equally divided between the two sexes, with very slight tendency to more males (50.6% being males). Although, this sex ratio is 102% for the whole population, it varies considerably among different age groups. This is lower for the 15-34 age groups, reaching its minimum at the 25-29 age groups. The third observation from the table is that the Sudanese population is basically rural, some 65.2% being counted as settled in the rural areas. However, the ratio of the urban population to the total seems to be higher at ages 10-34 years, reaching its peak at the 20-24 age group. This might suggest rural-urban migration at these ages. The same observations are noticed when urban and rural sex ratios are examined. This is quite high in the urban areas (113%), compared to 98% in the rural areas. Thus, rural-to-urban migrants seem to be basically young males[2], or put in other words, the propensity to migrate to urban areas seems to be higher among the males than the females, and higher among

the young than the older people.

The nomadic population also forms a considerable proportion of the total. According to the 1973 census, about 11.5% of the population was counted as being rural nomadic. Added to the rural settled population, this would suggest that more than 3/4 of the total population is rural. This would suggest a very small urban population, and in fact this makes only about 18.5% of the total population. However, in spite of this small share in total population, the urban population has been growing at a faster rate than the rural population. The overall urban population growth rate for the inter-census period has been calculated as 7.4 per cent per annum, while the rural growth rate amounted to 1.5 per cent per annum(3). This could well be attributed to rural-urban migration in the country. Table A4 in Appendix A gives an indication of inter-province migration according to the 1973 population census. It seems that inter-province migration occurs mainly to three provinces, Khartoum, Blue Nile, and Kasala. In fact these three provinces have experienced the highest growth rates of population between the two censuses (4.9%, 3.5% and 3.0% per annum respectively). The least growth rate in the northern region was experienced by the three sending provinces, the Northern, Kordofan, and Darfur provinces (0.65%, 1.28% and 2.85% per annum respectively). The three provinces of the Southern region, although they do not seem to send significant numbers of migrants, seem to be exceptional. One province experienced only a marginal increase (Bahr el Gazal 1.99%), while the

other two have a negative population growth rate (Equatoria -1.04, and Upper Nile -0.62). Such a decline in population could be attributed to the 17 years civil war in the region, which ended in 1972.

The size of the labour force, measured by the economically active population, which are those productively engaged whether full-time or part-time, amounted to about 29.5% of all population according to 1973 census. This ratio is lower than in the first census, which indicated 37.0% of all population. The reason for such a difference could be the difference in the lower age limit of the economically active population, being 5 years in the first census and 15 years in the second. Moreover because of the increase in school enrolment in 1973 than in 1955/56, more of those under 24 years of age would be counted as students, and not included in the labour force. Table 3.1 below produces a summary of participation rates according to the two censuses and surveys undertaken.

Table 3.1: Coverage, age limit and participation rates in major surveys and censuses.

Survey or census	Cover-age	Lower age limit	crude participation rate		
			male	female	both
1955/56 population census	ALL Sudan	5	66.4	7.0	37.0
1964/65 census of agriculture	North-rural	None	60.3	43.9	52.1
1964/66 population & housing survey	North-urban	8	52.5	5.3	30.1
1967/68 Household survey	All North	-	49.3	9.6	29.3
1973 Population census	All Sudan	15	47.1	11.9	29.6

Source: ILO "Growth, employment and equity: A comprehensive strategy for The Sudan" ILO, 1976, Table 59, P.305.

The comparison between crude participation rates in the Table is complicated because of the different concepts of economically active population, coverage, and age limits used in each survey or census. However, a remarkable feature of the table is that female participation rates are much lower than those of males in all censuses and surveys. However, because of the complication in comparing these rates, results of the latest census are discussed in more detail, to give an idea about labour force composition. Activity rates, according to this census, differ according to age, sex, and region. Most of the economically active population is in the age groups 15-45, with the highest concentration in the 25-29 age group. A high participation rate was recorded for males in the age group 25-44 years. The corresponding activity rate for females is much lower. Due to economic, social and religious reasons, it is not common for women to go out for work. The percentage of active population for both males and females is lower in the urban areas than in the rural areas. For example, the male activity rate in the rural areas amounts to 91.4% of all ages, while that in the urban areas is 85.3%. Due to the concentration of higher education facilities in the urban areas, large proportions of the population under 24 years of age would be counted as students, thus reducing the activity rates in the urban areas. Moreover, agricultural activities in the rural areas might involve many members of the family, thus increasing the activity rates in these areas. This is clearly seen when female activity rates are investigated. This is

much higher in the rural areas, being 24.7%, while in the urban areas it is as low as 10.6%.

To sum up, the assessment of the population and the labour force in this sub-section has shown that the urban population, although increasing at a faster rate than the rural population, still represents a small proportion of the total population. Moreover, the participation rates seem to be smaller in urban than in rural areas. This indicates that the urban labour force is relatively small. Moreover activity rates among females are considerably smaller than among the male population. However, it is not only the population size and its activity rate that determines the supply of labour, but also the educational and skill composition of this population.

3.2.2. The educational status of the population

The literacy rate among the Sudanese population seems to be quite low. More than two thirds of the population is illiterate. Some idea about this is given in Table 3.2 below.

Table 3.2: Literacy rate by sex and rural/urban, population 10 years of age and more, 1973 census

Sex	Total population	Urban population	Rural population
Male	44.3	65.4	37.7
Female	18.0	38.9	12.2
Both	31.3	53.4	24.6

Source: 1973 population census.

The low literacy rate among total population is clearly indicated in the table. Moreover, the table shows the differences in literacy rates between the sexes and between the urban and rural population. This is more than twice as high in urban areas as in rural areas. This is partly caused by the concentration of educational facilities, especially higher education institutes, in the urban areas, and partly by the rural-urban migrants being basically educated people. The low literacy rate in rural areas would be even lower if the nomadic population were taken into consideration. The table, furthermore, shows lower literacy rates for females than males. Interestingly, however, the literacy rate among females in urban areas is higher than that of the males in rural areas. In spite of this, one should recall that activity rates among females in urban areas are lowest. In general, however, such low literacy rates in the population indicate limited experience and skills of the labour force in the country.

The school enrolment ratio is also very low. According to the 1973 census, only 31% of those aged 7-24 years were attending schools. This indicates that the educated manpower would not form a high proportion of the population. However, the school enrolment ratio seems to be higher for males than females (40% and 22% of males and females aged 7-24 years respectively). The educational system, moreover, seems to be dominated by general academic studies, rather than technical studies. Students of high secondary schools taking technical courses in 1976/77, amounted to only 17%

of total students for that year[4]. Such a system of education affects higher education too, in the sense that males and humanities studies would dominate the higher education. Female students in universities and higher institutes make up only 20% of students in these institutes in 1976/77, and about 14% of graduates for that year[5]. The effect of such a system on graduates is demonstrated in Table 3.3 below.

Table 3.3: Graduates by degree and major field of study from universities and higher institutes in The Sudan, 1976

Field of study \ Degree	H. Institute Diploma (No.) Total	H. Institute Diploma (No.) Female	University 1st Degree (No.) Total	University 1st Degree (No.) Female	Total (No.)	Total %
Education & teacher training	31	2	110	18	141	4.7
Law, humanities, religion, etc.	53	10	723	185	785	26.1
Social & behavioral sciences	-	-	258	16	258	8.6
Commerce & business admin.	54	10	538	176	592	19.7
Natural science	-	-	102	18	102	3.4
Medical & health related	78	38	226	26	304	10.1
Engineering & architecture	132	6	176	7	308	10.3
Agriculture, Fishing, etc.	181	4	227	29	458	15.2
Others	56	33	-	-	56	1.9
Total	585	103	2419	475	3004	100.0

Source: UNESCO "Statistical Yearbook" 1978-79.

The table shows that a large percentage of graduates are those who have been taking theoretical courses. The highest proportion of graduates being graduates of Arts, humanities and religious studies, followed by graduates of commerce and business administration. The graduates of engineering, agriculture, medicine, etc. make lower proportions. Such a tendency in the education system may create structural imbalances in the labour market in the sense that there might be excess supply of certain professions and shortages in others. This might lead to unemployment in some portions of the labour force and supply bottlenecks in others.

3.2.3: Immigration

The population counted as being born outside The Sudan amounted to 220,239 according to the 1973 population census. This would make only about 1.6% of the total population of the country, a very small proportion. However, it is widely believed that a considerable underenumeration has occurred in this foreign population. Table A5 in Appendix A shows this population by age, sex, rural and urban areas. Although these foreign born population make 1.6% of total population of the country, the ratio increases with age, indicating that immigrants might contribute to the labour force. However, the sex ratio of the foreign population is very low, especially at the working ages. This is the opposite of what one would have expected in an immigrant population, in which males are expected to be more numerous than females. Such an observation suggests either underenumeration or that this

immigration is family immigration, or both. The table furthermore indicates that the majority of these immigrants were counted in rural Sudan, some 67.3% of them being counted in the rural areas. However, the percentage of them counted in the urban areas is much higher than that of the Sudanese born population, 32.7% of the immigrants being counted in the urban areas, compared to 18.5% of the population born in The Sudan. When broken by province of enumeration (Table A4), these immigrants tend to be concentrated in the border provinces, especially Equatoria in the south, Darfur in the west and Kasalla in the east. Together, the three provinces receive nearly 60% of these immigrants. The Blue Nile province, where cotton picking attracts migrants receives 20% of these immigrants, while the urban centre in Khartoum province receives only 12%. Coupled with the refugee influx from Ethiopia in the east, Chad in the west and Uganda in the south, one is tempted to say that most of these immigrants are either refugees or workers who move from neighbouring countries across the borders with their families. This might explain the high ratio of females in the immigrant population. However, the investigation of the origins of this population, although showing that most of the immigrants are of African origin, many of them from neighbouring countries, reveals that non-neighbouring countries also contribute to this immigrant population. Table A6 in Appendix A gives the immigrant population by country of origin, according to the 1973 population census. It is easily seen from the table

that immigrants are basically African, about 96.1% of them being of African origin. However, it is the Nigerians who form the largest group. Together with migrants from Chad they make nearly 75% of total immigrants. Migrants of Arab origin, excluding Egypt, make a small proportion, notably from Yemen. Europeans are only 0.7%, while Asians are only 0.8% of immigrants according to the 1973 population census.

A different picture is provided when work permits issued to foreigners by the Department of Labour are investigated. It is no longer the Africans who dominate the work permits, but the share of others is considerably higher. Table A7 in Appendix A shows work permits issued by the Labour Department to foreigners in 1977/78 by nationality. Work permits issued to Africans amounted to 44.9% of the total, those issued to Europeans 36%, while the Asians accounted for 13.0% and the Arabs are a minority of 5.4%. The two important groups of Nigerians and Chadians counted in the census do not appear in work permit issue. This is probably because they do not work in the formal modern sector, but rather in the informal sector and the agricultural sector, where work permit rules are not enforced. The highest share of work permits is issued to Egyptians who make 21.4% of the total. These groups, however, work in the formal modern sector, as teachers, technicians, etc. In fact more than 73% of work permits issued to Egyptians were in the nature of professional, technical or skilled workers. In all about 55% of work permits were for such types of job. Such would suggest that the issue of work permits would tend to reduce the loss

of high-level manpower as a result of migration abroad. However, apart from the fact that work permits issued to foreigners are few relative to emigration abroad, the latter is increasing at a faster rate than the former. For example, the increase in the number of work permits issued to foreigners by the Department of Labour was only about 5% between 1976/77 and 1977/78, compared to 76.6% increase in the number of Sudanese migrating abroad through the Labour Department only, in the same period(6).

3.2.4: Emigration

Much detailed discussion about migration patterns from The Sudan and migrants' characteristics are in Chapters Two and Five, and we need not repeat them here. However, we should point out that, although emigration is of a recent nature, it has increased substantially after the mid-1970s. Moreover, skilled and educated manpower, seems to be of considerable proportions among migrants as compared to the economically active population as a whole. For example, out of the total of 10175 migrants through the Labour Department, between 1974/75 and 1977/78, only 26.9% were unskilled labour, the remaining being professionals, technicians, and skilled labour(7). Moreover, in a study about absenteeism from work without permission, in the public sector, by the Labour Department in 1976/77 and 1977/78, out of a sample of 98116 employees, 8040 (8.1%) left their work without permission or previous notice. It is believed that these have illegally migrated abroad. Out of these, however, the professional, administrative and those with skilled jobs were more than

23%[8]. Thus in the nature of selectivity in the migration process, one would expect the most able, educated and experienced to migrate. In this way emigration could be one cause of educated manpower shortage in the country.

In summary, it seems that the economically active population in The Sudan forms a small proportion of the total population. Moreover, it seems that the urban labour force is very small relative to the rural labour force. Furthermore, the low literacy rate among the population would indicate very small skilled and educated manpower in the country. Moreover while immigration is largely composed of unskilled labour from neighbouring countries, emigration seems to draw on the most able, educated and experienced labour force. How far this would affect the labour market and employment situation in the country would not be clear unless an assessment of the labour market characteristics and the demand for labour is made. In the next section we shed some light on the labour market characteristics.

3.3: Characteristics of the Labour Market

The economy of The Sudan is principally agricultural. Table A8 in Appendix A shows the contribution of different sectors to the GDP of the country. It is noticed that agriculture is the dominant contributor to the GDP. Although its share has been decreasing since independence in 1956, (from 61.0% in 1955/56 to 33.5% in 1979/80) it continued to contribute more than one third to the GDP. The contribution of the manufacturing sector on the other hand, although it has been increasing, never reached 10% of the GDP. Such a

structure of the economy, being basically agricultural, and divided into traditional and modern sectors, has its effects in shaping the Labour Market. In this section we attempt to identify the main characteristics of the labour market in the country, especially the urban labour market, and see how it works. Three main issues are discussed, the employment structure, the wage and salary structure, as well as unemployment situation. Each of these is discussed in a separate sub-section below.

3.3.1: Employment structure

As indicated in Table 3.4 below, agriculture is the dominant activity of the population, some 65% being involved in agriculture(9). This is not strange in an economy where agriculture contributes the most to the GDP, and where most of the population are in the rural areas. The table, furthermore, shows that the percentage of women involved in agriculture is higher than the percentage of men in this sector, i.e. women are mainly engaged in agricultural activities more than others. This is due to the involvement of rural women in agricultural activities. This could explain the high economic activity rates of women in the rural areas noted in 3.2.1 above. Moreover, the table shows the small size of manufacturing sector employment, which involved only 3.9% of the total economically active population in 1973. It is interesting to note that over 50% of those involved in this sector, according to the census, are classified either as "employers" or "own account workers" or "unpaid family workers". This indicates that apart from

Table 3.4: Economically active population by sector, 1973.

Sector	Total		Male		Female	
	No.	%	No.	%	No.	%
Agriculture(1)	2,253,158	65.2	1,642,992	59.5	610,166	88.0
Mining and quarrying	2,984	0.1	2,872	0.1	112	-
Manufacturing	135,153	3.9	113,529	4.1	21,624	3.1
Electricity and Water	34,718	1.0	34,444	1.2	274	-
Construction	70,505	2.0	69,985	2.5	560	-
Trade(2)	185,809	5.4	172,370	6.2	13,439	1.9
Transport(3)	128,588	3.7	127,078	4.6	1,520	0.2
Finance(4)	4,523	0.1	4,012	0.1	511	-
Services(5)	380,367	11.0	343,173	12.4	38,194	5.5
Act. not defined	257,390	7.5	251,095	9.1	6,295	0.9
Total	3,453,235	100.0	2,759,865	100.0	693,370	100.0

Notes (1) Agriculture, fishing, hunting and forestry

(2) Wholesale, retail trade, restaurant and hotel

(3) Transport, storage and communications

(4) Finance, insurance, real estate, etc.

(5) Community, social and personal services.

\- Indicates less than 0.1%.

Source: 1973 population census.

a few large scale employers, a large amount of employment is in very small scale establishments, many of which are best thought of as being in the informal sector. According to the 1978 private sector establishments survey of the Department of Labour(10), out of 452 establishments in the manufacturing sector, only 52 or 11% were employing 100 employees or more, while the highest proportion of them, some 27%, were employing

10-14 employees only. All this implies that the modern manufacturing sector in the country is very small. The modern agricultural sector employment does not seem to be large either. Only 10.5% of those involved in agriculture are classified as 'employers', the majority of the remaining being classified as "own account workers" or"unpaid family workers". Apart from large scale schemes owned and operated by the government, like the Gazera scheme, Rahad scheme, etc., most agricultural activities could be classified as subsistence sector, which provides employment for the owners, or the family members.

It is interesting to note that the services sector is the second largest which involves the economically active population, as indicated in the table above. Moreover, the highest proportion of those classified as "employees", some 36.8% are in the services sector. This suggests that most modern formal employment is provided by the government or the public sector. This is more understandable if we note that the government provides most of the services, like health, education, etc. Moreover, the transport and communications system, e.g. Sudan railways, river transport, the Post Office and Telecommunications, are operated by the public sector. This is besides the public sector involvement in industry, agriculture and other activities. Thus an analysis of public sector employment might give more indication about the labour market. Table 3.5 overleaf shows public sector employment by economic sector in 1978.

Table 3.5: Public sector employment by economic sector, 1978 (in 1000)

Sector \ Employment	Salaried employees No.	%	Wage Earners No.	%	Total Employment No.	%
Agriculture	25.0	27.6	35.9	19.1	60.9	21.8
Manufacturing	9.8	10.8	19.8	10.5	29.8	10.6
Commerce	6.1	6.7	30.6	16.3	37.7	13.2
Transport and Communications	11.5	12.7	47.2	25.1	58.7	21.1
Services	38.3	42.2	54.7	29.1	93.0	33.3
Total	90.7	100.0	188.2	100.0	278.9	100.0

Source: "The public sector employment survey 1977-78", Ministry of Public Services and Administrative Reform, Khartoum, cited in A.S. Ahmed "The manpower situation in the Sudan" Labour & Society, Vol. 5(3), July 1980.

The table clearly indicates that the highest proportion of public sector employment is in the services sector. This is followed by the agricultural sector, where most of the modern large scale schemes are owned and operated by the public sector. The manufacturing sector is the least employing sector, employing only 10.6% of public sector employees.

The employment structure in the country would certainly be affected by the skill differentials among the population. The education system and the low literacy rate among the population, as noted in 3.2.2 above, would leave its marks in the labour force and the labour market. In other words, the educated manpower would be expected to form a small proportion of the labour force. Thus, those with high level occupations

i.e. professional, technical and administrative workers make only 3% of the total economically active population according to the 1973 population census. The dominance of labourers in the labour force is also reflected in public and private sector employment. In the public sector, labourers make about 67.5% of total employment of 278,900 in 1978, while those with technical, professional and administrative jobs make 7%, and the remaining are general and higher secondary school leavers(11). The private sector employment in 1978 amounted to 48,748 (excluding employment in agriculture) out of which 85.3% are classified as labourers, 6.3% with technical, professional and administrative jobs, and about 8.4% are those with general and higher secondary levels of education(12). This indicates that the private sector employment is not only small in size relative to the public sector, but it also employs lower proportions of the educated manpower in the country. In other words, most employment of the educated manpower is in the public sector. This stems from the fact that the public sector sets out as an employer 'of the last resort' to the educated manpower. The government being a major employer used to work as an employer 'of the last resort' for university graduates and school leavers, irrespective of the actual demand for them. Thus, under the political pressure of 'educated unemployment', the government had to create an unemployment relief fund in 1966, and thus an employment policy was introduced to guarantee employment to all graduates of universities and post-secondary institutes.(13)

In the beginning and until 1970, even the general and higher secondary school leavers, who were not able to enter the next stage of the education system, were also employed under this scheme(14). Since 1970, however, it appears that the scheme applied to graduates of universities and higher institutes only. In 1974, after establishing a board for recruiting university and higher institute graduates, the policy of employment was changed and a new budgetary allocation system was adopted. Under the revised system, the government continues to guarantee employment as an employer of the last resort - to all professional university graduates, and all technicians from higher institutes, both inside and outside the country(15). This assurance is no longer available - in theory at least - to graduates of arts, humanities, law, social sciences, mathematics and general sciences. Such a policy of employment might explain the high proportion of educated manpower in public sector employment. Moreover, it might explain the low levels of unemployment, especially among the university graduates as would be seen later in the chapter.

3.3.2: Wages and salaries structure

The public sector, being the leading employer in the country, has a clearly demarcated wage scale, with a minimum level, annual increments and criteria for climbing along the scale from a specified minimum to a maximum pay. However, it seems that in the public sector, legislation has played a major role in determining wage levels and its structure.

Three cadres and one minimum wage fixation order were introduced in this sector. These are the 1952 and 1968 cadres, the 1974 minimum wage order and the 1978 Job Evaluation and Classification Scheme (JECS).

The 1952 cadre divided the labour force into five categories of skills, and within each category, it specified different scales. It defined the minimum and maximum pay within each category, the criterion to enter each category and move along the wage scale ladder, taking the educational level as the main criterion(16). In line with the 1952 cadre, the 1968 cadre adopted a "point" system of job evaluation. This attached a certain number of points to each job, according to the academic and training qualification required for the post, the responsibilities attached to it, the mental and physical efforts required to carry out the post, as well as the working conditions attached to the post(17). The 1974 minimum wage decree did not change the wage structure, but only raised the minimum nominal wage level from £S13.900 to £S 16.5 per month, and brought general increments in wages amounting to 17% for low paid groups, and 12% above that(18). The basic aim of the 1978 JECS was the evaluation of individual jobs within the public sector and the setting up of an organizational chart showing the relationship of one grade to another and the relevant pay scale(19). Thus a new system of job classification and pay structure was introduced. The pay scale was divided into 22 categories, with criteria to enter each category. The main criteria, however, were educational attainment and the nature of the

job, i.e. a combination of the other two cadres. Thus the scheme has come under the criticism of simply matching the already existing pay scales with the newly created scales[20]. The wage level was also supposed to change according to the JECS. The rate of increase in wages was higher for the least paid groups, decreasing for higher paid groups[21]. These increments were supposed to be implemented in two phases; 50% of the proposed increase in July 1978, and the remaining 50% in July 1979. The first phase was already implemented in July 1978, while the second phase was suspended to review the whole scheme, and was never implemented[22]. The first phase brought about a 35% increase for the lowest paid workers and down to about 6.6% for the highly paid employees. Thus although the public sector has a clearly demarcated pay structure, legislation seems to have played an important role in determining the pay structure and the wage levels.

In contrast, no definite structure of wages prevails in the private sector. There was no minimum wage legislation for this sector, and it was only in 1974 that the government forced the private sector to adopt the minimum wage standard, and private firms were allowed three years until 1976 to reach the £S 16.50 minimum wage of the public sector in three annual increments. However, this excluded agricultural workers, establishments employing less than 10 workers, as well as workers under 18 years of age[23]. Thus those benefiting from this order would be a minority of the labour force in the private sector. As for wage levels, at least

in the early 1970s, the unskilled and semi-skilled were paid better in the public sector than in the private sector. For example in January 1970, the monthly nominal wage in the private sector for the unskilled was £ S 9.57, while it was £ S 13.90 in the public sector. The private sector, however, seems to pay more for technicians and professionals[24]. However, wages in the private sector are more complex to compare to the public sector, or within the private sector itself. This is because of variation in size, activities undertaken, skills employed, hours of work, the influence of government legislation, the pressure of unionization etc. The absence of a demarcated pay policy as well as information about the above factors, makes it difficult to carry the analysis further. However, comparison of weekly earnings in the private sector, according to the 1978 private establishments survey of the Labour Department, shows that the manufacturing sector is not the leading sector in setting wages, but rather the transport and communication sectors, as well as finance and trade. Moreover, it shows wide differences in earnings in different sectors within the private sector itself. An explanation of such variations, apart from the absence of a pay policy, could lie in the size of establishment, hours of work, skill composition, etc.

3.3.3: Unemployment

When it comes to unemployment and underemployment, the problem gets more complicated, not only because of the absence of data, but also because of differences in the concept and definition of who is to be considered as unemployed.

The word 'unemployment' can be used in many different senses. It has been said that it can describe the condition of not being at work, the activity of seeking work, the attitude of desiring a job under certain conditions, and the need of finding a job[25]. Accordingly, statistics about unemployment would differ according to the concept and definition of the word unemployment and underemployment. In general, however, these statistics are found from the censuses, the sample surveys, or from the employment exchange registers. The available data about unemployment in The Sudan draws upon all these sources, and although fragmentary, gives some indications about this problem in The Sudan.

The ILO, general level of unemployment based on the employment offices statistics and defined as the number of applicants for work on the register at the end of each period relative to the total labour force is given in Table 3.6 below.

Table 3.6: General rate of unemployment 1970-1979

Year	1970	1971	1972	1973	1974	1975	1976	77	78	79
U.R. (%)	4.76	4.95	4.08	4.06	4.42	5.49	6.68	6.45	3.56	6.62

U.R. = unemployment rate

Source: ILO"Yearbook of Labour Statistics" 1980.

As seen from this table, the general level of unemployment in the country seems to be very low. However, a surprising thing about these figures is that they have changed so little over these years. So one doubts whether the low and seemingly

constant rate of unemployment hides a lot of under-employment. However, based on the employment offices statistics, the value of the statistics varies widely. Where registration is entirely voluntary and especially where the employment offices function only in the more populated and urbanized areas of the country, or are not widely used by employees seeking work or employers seeking workers, the data from these offices are generally very incomplete and do not give a reliable indication of the extent of unemployment(26). Thus it would be interesting to seek other sources of data which might better reflect unemployment in the country.

Attempts to measure unemployment were made through surveys and censuses. When these are investigated, it seems that the unemployment problem in The Sudan is basically an urban problem. This is best reflected in the 1967/68 Household Budget survey. According to this, unemployment rate for Northern Sudan amounted to about 2.9% of the labour force, ranging from 1.5% in rural areas to 7.5% in semi-urban areas to 9.6% in the urban areas (27). Other surveys also attempted to measure unemployment, especially urban unemployment. These are summarised in Table 3.7 overleaf.

These estimates in the table are not strictly comparable. They are for different years, and there are also differences in sampling methods, coverage, and in basic definitions. The Population and Housing Survey, for example, defines the labour force as persons above eight years of age; the Household Budget Survey does not define a limit, while the Galeldin's estimates refer to unemployment levels of males

Table 3.7: Some estimates of the level of urban unemployment in The Sudan according to surveys and censuses

Survey/census	Year	Coverage	Unemployment rate (%)
Population census	1955/56	All Sudan	1.7
Population and housing survey	1964/66	Khartoum and Omderman	5.0
Population and housing survey	1964/66	All urban areas	3.5
Household Budget survey	1967/68	All urban areas	9.6
Galaleldin survey	1971	Khartoum	5.6
MEFIT survey	1974	The three towns	6.5
ILO survey	1974	The three towns	5.9
Population census	1973	All Sudan	6.0

Notes: (1) The Three Towns are Khartoum, Omderman and Khartoum North.

Source: For 1955/56 census, ILO, "Growth, employment and equity.." p.312. For 1973 census, the provisional results of the census. For all others, either the survey itself or Table 67, p.313 of ILO "Growth employment and equity ..." 2nd impression, 1978.

only and defines the labour force as persons of ten years of age and over. The ILO defines this as those 12 years of age and above, while the 1973 census defines it as those of 15 years and above. However, unemployment rates in urban areas seem to be higher than those for all The Sudan. It is more interesting however to have unemployment rates in more detail by age and sex. Some idea of these is shown in Table 3.8 overleaf.

Table 3.8: Unemployment rate by age and sex (Khartoum) 1974

Age	12-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
Male	5.1	24.6	27.0	7.5	4.0	3.2	2.0	1.2	5.6
Female	1.2	4.4	5.1	4.4	2.7	0.4	1.2	0.4	-

Source: ILO survey of Greater Khartoum, cited by T. Mulat. (1975) "Educated unemployment in The Sudan" World Employment Programme Research, working papers, ILO, July 1975, Table 2 p.8. In the original table, these two rows are added for each age group and reported as unemployment rate for both sexes.

The breakdown of unemployment rates by age groups reveals that the age groups 15-19 and 20-24 have the highest unemployment rates. These are ages of leaving school and university, and this might suggest that the unemployment problem is basically a problem of the urban educated labour force. The table shows lower unemployment rates among females than among males. This, however, does not mean that unemployment problems are less acute for females. This is because of the low participation rates of females, and as discussed above, the socio-cultural factors prohibit females from seeking employment.

Thus, although the evidence is fragmentary, the unemployment situation in The Sudan might be summarised in the following points:

(i) Unemployment seems to be more acute among males than females, although this might be due to the low participation rates of females.

(ii) The youngest persons, i.e. those aged 15-24 years seem to be especially prone to high unemployment rates.

(iii) Unemployment rates are low for the illiterates, gradually increasing to higher proportions among the educated, but decreasing for the above secondary levels of education, i.e. unemployment is more acute among general and higher secondary school leavers.

(iv) The rate of unemployment seems to be higher in urban areas than in rural areas, suggesting that unemployment is basically an urban problem.

However, it should be noted again that official data on unemployment could be misleading, and that the evidence presented in this section is largely fragmentary, therefore such conclusions should be taken cautiously. Moreover, we are not able to quantify the extent of underemployment, since apart from the definition of such a word, data is seldom available. The ILO survey of 1974, defined the underemployed as those working less than 35 hours a week. These amounted to 3.1% of the labour force in Greater Khartoum. However, with most of the population involved in agriculture, there is the possibility that a considerable proportion could be underemployed. Furthermore, the government policy of employing educated manpower, might result in an inflated civil service with a degree of considerable underemployment. In fact it is usually claimed that the civil service is already overstaffed and it "could do with half its personnel" and that "it is overloaded at the top with a large number of high scale officials, and at the bottom with too many lower posts...".(28)

3.4: Future requirements of manpower.

Section 3.2 of this chapter was addressed to the supply of labour in the Sudan, while employment, underemployment, etc. were discussed in Section 3.3. In this section we turn to the demand for labour side, especially the future requirement of manpower. Unfortunately data is not available in the details of enabling precise conclusions to be drawn. However, in the recent 6-year plan of economic and social development of 1977/78 - 1982/83, attempts were made to estimate supply and demand for labour for the plan period. These projections could give some indication about future requirements of manpower in the country, and we make use of these, as well as data from other sources, in the analysis of this section. These estimates are reproduced in Table 3.9 overleaf. The table however does not show estimates for unskilled labour. These were not taken into account by the plan on the assumption that it would be abundant.

According to the plan's projections in the table, a shortage of 11,000 workers is expected by the end of the plan period. These 1.3% shortage in labour does not seem to be very alarming, given the conditions prevailing under the plan's assumptions. It must be pointed out that these estimates were made without taking international migration into account, and therefore the situation might be different if the supply of labour were projected accounting for emigration and other factors. However, although the overall shortage of labour as predicted by the plan does not look very serious, shortages in certain categories of labour,

Table 3.9: Demand for and supply of labour over the 6-year plan period 1977/78 - 1982/83 by occupation (1000)

Occupation (and level of education)	Demand	Supply	Balance	Balance as % of demand
Professionals (university graduates)	23.5	26.0	+2.5	+10.6
Technicians (applied higher institutes)	24.0	13.7	-10.3	-42.9
Assistant technicians (H.Second. Sch. Training)	24.0	17.5	- 6.5	-27.1
Skilled labour (H. Technical Second. element. Sch. teachers & Training)	72.0	48.8	-23.2	-32.2
Clerks (general and second. schools)	41.0	45.0	- 4.0	- 9.8
Semi-skilled (elementary, general secondary & handicraft)	648.0	679.0	+31.0	4.5
Managing Directors (Miscellaneous)	8.5	-	- 8.5	-100.0
Total	841.0	830.0	-11.0	-1.3

Notes: Balance indicates supply less demand, thus a + sign indicates surplus while a - sign indicates shortage.

Source: "The six year plan of economic and social development 1977/78 - 1982/83" Ministry of National Planning, Khartoum, April 1977, Vol. 1, Table 10-7, p.103.

especially technicians and skilled labour are much higher. Moreover, when each category is examined alone, shortages of certain types of labour, and surpluses of other types, within each occupation group are found. For example, while there is a surplus of 10.6% of the professionals, or the university graduates, this surplus is mainly in graduates of

social sciences, arts and humanities. Such imbalances are seen clearly in Table 3.10 overleaf.

The table clearly indicates that the excess supply of 10.6% in the professional occupations is only from graduates of general sciences, mathematics, social sciences, humanities etc. Occupations of critical importance to economic growth like engineering, agriculture, and veterinary scientists show shortages of high percentages. The deficit being 49.1%, 46.8% and 54.5% respectively. The shortage in the supply of technicians is much greater, amounting to over 40% of the demand. This is more acute in the case of certain specializations, e.g. veterinary science technicians, engineering, and agricultural technicians, etc.

As pointed out above, what the plan fails to predict is the consequences of migration abroad on the supply of labour. Although the plan is very recent, it does not refer to the process of migration, the number of Sudanese working abroad or the possible brain-drain in the future, possibly because these started to assume a large scale only recently. However, in the presence of the very rapidly increasing emigration, especially in the late 1970s (Chapter Two), the shortages of labour as predicted by the plan would be very much aggravated. Moreover, the skill composition of migrants, and the high tendency of migration to select from the educated and the skilled (Chapters Two and Five), would mean further shortages in occupations already predicted to have acute shortages by the plan. This failure of the plan to

Table 3.10: Demand and supply of professionals and technicians for the 6-year plan by specialization.

Specialization	Professionals				Technicians			
	Demand	Supply	Balance	%	Demand	Supply	Balance	%
Agriculture	5000	2660	-2340	-46.8	5000	2150	-2850	-57.0
Veterinary	2200	1000	-1200	-54.5	2000	580	-1420	-71.0
Medicine(a)	3010	2845	-165	- 5.5	2400	1370	-1030	-42.9
Engineering(b)	4400	2240	-2160	-49.1	11250	6065	-5185	-46.1
Science & Maths.	2000	2900	+ 900	+45.0	-	-	-	-
Accounting & Finance	3000	4700	+1700	+56.7	1600	1600	0	0
Teachers(c)	1700	1640	- 60	- 3.5	900	900	0	0
Eco. & Soc. Science	1500	2690	+1190	+79.3	-	-	-	-
Law	495	1740	+1245	+251.5	-	-	-	-
Office workers	-	-	-	-	500	500	0	0
Others	200	3585	+3385	+1692.5	300	530	+230	+76.6
Total	23,505	26,000	+2495	+10.6	23,950	13,695	-10,255	-42.9

Notes: (a) Medicine includes general practitioners, dentists and pharmacologists for the professional groups, and the medical assistance for the technicians.
(b) Engineering includes all specializations, i.e. mechanical, electrical, civil, etc.
(c) Teachers refer to high secondary school-teachers for the professional groups, and general secondary school teachers for the technicians.
% is the balance as percentage of demand.
- indicates that the specialization does not apply to the given occupational category.
(d) Other notes as in Table 3.9

Source: abridged from Tables 11-7 and 12-7, p.105 of the source referred to in Table 3.9 above.

account for emigration seems to be rooted in the highly mechanical way of projection, i.e. the supply would represent graduates of universities, institutes and schools each year, while demand would increase with the projected increase in GDP. Estimates of supply of labour should allow for many factors, among which are labour mobility, whether geographic mobility abroad or internal mobility, or whether occupational mobility, death rate, retirement rate, etc.

The projected demand for labour, however, has also not increased according to the plan's predictions. The plan aimed at an annual growth rate of GDP of about 7.5% per annum. However, neither the GDP, nor investment have grown according to the plan. The growth rate in GDP at current prices for the period 1970-79 was estimated to amount to about 4.3%(29). In real terms, however, the growth rate is much lower. We calculated GDP growth rate for 1970-79 to be about 1.55%(30). Economic planning itself has witnessed considerable plan turnover. Since independence in 1955/56, the country had three economic plans; the 10-year plan of 1960/61 - 1970/71; the 5-year plan of 1970/71 - 1974/75 and the six-year plan of 1977/78 - 1982/83. The 10-year plan was abandoned half-way through in 1964/65, after a change in government. The 5-year plan was quickly amended by the "interim programme of action" in 1973, and emphasis was shifted from investment in agriculture to transport and communications, and the plan period was extended by two years. The 6-year plan has also been suspended after the first year of the plan and replaced by the "three

year economic consolidation programme"[31].

It is not only plan turnover that was high in the country, but also there was always less actual expenditure than what was planned for development. Table 3.11 below gives some information on actual and planned development expenditure in the country.

Table 3.11: Approved allocation and actual development expenditure 1970/71 - 1978/79 (£S million)

Year	Approved allocation	Actual expenditure	Execution rate (%)
1970/71	36.0	26.7	74.2
1971/72	65.9	29.8	45.2
1972/73	65.5	29.6	45.2
1973/74	85.6	41.8	48.8
1974/75	205.0	102.4	50.0
1975/76	131.7	113.1	85.9
1976/77	254.2	216.0	85.0
1977/78	307.0	185.9	60.6
1978/79	202.9	164.9	81.0

Source: Bank of Sudan "Annual Reports", and "The Economic Survey" of the Ministry of Finance and National Economy (different years).

N.B.: execution rate = (actual ÷ approved) x 100.

In the early 1970s, the execution rate, i.e. actual expenditure relative to planned expenditure, did not exceed 50% except for 1970/71, the first year of the 5-year plan. In the second half of the decade, however, this started to increase. It must be noted here that there is a considerable

reduction in amounts allocated - as well as actual - in 1975/76, in which there was a reduction of £S 73.9 million of allocated funds than in 1974/75. Both these were increased in 1976/77 to finish on-going projects, in order to start the 6-year plan. The first year of the 6-year plan, 1977/78, had a very large allocated fund for development. However, actual investment fell short of the planned target by £S 121.1 million, or nearly 40%, and was lower than the previous year's actual investment. Realizing the shortages of manpower, and capital, the government quickly suspended the plan and undertook the "three year economic consolidation programme" for the period 1978/79 - 1980/81. The programme places major emphasis on "completing projects already in progress, and easing bottlenecks in capital, labour, and infrastructure".(32) Thus the allocated development expenditure and the actual both fell after the first year of the plan, and the targeted growth rate of the GDP was put down to 6.5% per annum(33).

Thus, it is not only the supply of labour projected by the six-year plan which is in doubt, but also the projected demand for labour. In such a case it would be very difficult to give a precise account of the future supply-demand situation of the labour force. However, the general impression from this section is that, although there could be some surpluses of certain types of labour, yet, acute shortages could exist of other types.

3.5: Summary and conclusions

Like many developing countries, it is notable that the Sudanese economy is mainly agricultural, with agriculture contributing the most to GDP and exports. Thus agriculture involves nearly two thirds of the economically active population of the country. However, apart from the large scale agricultural schemes owned and operated by the public sector, activities in the agricultural sector are mainly in the traditional subsistence part. The manufacturing sector is very small and contributes less than 10% to the GDP. All this contributes to the small urban labour market in the country. The public sector is by far the largest single employer in the country. The private sector employs only a small proportion of the labour force, the majority of which is best thought of as being informal sector employment.

With low levels of literacy of the population, the educated labour force makes a very small proportion of the economically active population. However, although the literacy rate is improving, in the sense that more and more school and university graduates are produced, the educational system seems to be biassed towards general academic studies rather than technical studies. The implication of this is an excess supply of educated manpower of certain types and shortages of other types. Moreover, it was noted that females not only have a lower literacy rate than males, but they also have much lower activity rates. This was attributed to various economic, religious, and cultural reasons.

The public sector has set a clearly demarcated wage structure, in which wage scales, minimum and maximum pay, as well as criteria for entry and moving along a scale are specified. However, it seems that legislation has played a major role in wage determination and wage levels in this sector, rather than only forces of supply and demand. In contrast, the private sector never had a clear pay policy, and it was only recently that the minimum wage legislation was enforced there.

Unemployment seems to be an urban problem in The Sudan, and mainly among the young school leavers. The low levels of unemployment in rural areas might hide considerable under-employment, especially in agriculture, although it is not possible to give a precise account of the extent of under-employment. As for the future requirement of manpower, the 6-year economic plan of 1977/78 - 1982/83 predicts shortages in the supply of some skills, e.g. engineers, agriculturalists, technicians, etc., as well as surpluses in others. These shortages might be aggravated and critical shortages occur to the degree of hindering the economic development process if emigration continues at the present rate and composition. The full implication of migration in this respect is investigated in other chapters, however, here it is worth pointing out that the plan's projections did not take this migration into account. Moreover, the projected demand for labour itself does not seem to have grown according to the plan, since the targeted growth rate in GDP was reduced, and the plan itself was suspended.

Notes to Chapter Three

(1) 1964/65 census of agriculture; 1964/66 Population and Housing Survey; and the 1967/68 Household Budget Survey; Department of Statistics, Khartoum.

(2) Such observations were also noticed by M.E. Galaleldin (1973) "Internal migration in The Sudan since World War II; with special reference to migration to Greater Khartoum". Unpublished Ph.D. Thesis, University of London 1973, and also by S.A. Obrai (1975) in his analysis of the ILO Survey in Khartoum "Analysis of migration to Greater Khartoum (Sudan)" World Employment Programme Research, Population and Employment Working Paper No.19, July 1975, ILO.

(3) ILO (1976) "Growth, employment and equity; a comprehensive strategy for The Sudan" 2nd impression, 1978, Table 58; P.304, ILO, Geneva.

(4) Ministry of Education, Department of Educational Statistics "Education Yearbook" Khartoum, 1977 (Arabic).

(5) Ministry of Education, Department of Educational Statistics "Higher education statistics yearbook, 1976/77" Khartoum, 1977, (Arabic).

(6) Department of Labour "Annual Report 1977/78" Khartoum, 1978 (Arabic).

(7) Department of Labour "Sudanese migration abroad" a paper presented to the S.S.U. Conference on migration in The Sudan, 1978, (mimo in Arabic).

(8) Department of Labour "A study about those leaving work without permission or previous notice" July 1979 (mimo in Arabic).

(9) According to 1967/68 Household Budget survey, some 71.4% of the labour force was engaged in agriculture. See M.E. Mustafa and K. Affan "The Sudanese labour market: an over-review of its characteristics and problems with special reference to the Urban Labour Market" in A.M. El-Hassan (ed.) "Growth, Employment and Equity: a selection of papers presented to the ILO Comprehensive Employment Mission to the Sudan 1974-75". ILO in collaboration with ESRC, Khartoum 1976. However, the low percentage of labour force in agriculture according to 1973 census does not necessarily imply a reduction in the labour force involved in this sector since 1967/68, because the survey does not specify a minimum age limit for defining the economically active population, while the census specifies this as 15 years.

(10) Department of Labour "Private sector establishments survey in private establishments employing 10 and more employees, 1978" Khartoum, July 1979 (in Arabic).

(11) "The Public Sector Employment Survey" cited in A.S. Ahmed (1980) "The manpower situation in the Sudan" Labour and Society, Vol. 5, No.3, July 1980.

(12) Department of Labour "Private sector establishment survey..." op.cit.

(13) M.O. Beshir (1977) "Educational policy and the employment problem in The Sudan" Monograph series No.3, DSRC, Khartoum, May 1977. Also, S. Nigam (1975) "Some observations on the government policy as an employer of the last resort" ILO, JASPA working papers, Addis Ababa, 1975 (mimo).

(14) ibid.

(15) M.E. Mustafa and K. Affan (1976) "The Sudanese Labour market..." op.cit.

(16) ibid; also ILO "Growth, Employment and Equity ..." op.cit.

(17) ibid.

(18) Ministry of Finance and National Economy "Economic Survey 1974" Khartoum 1975 (Arabic).

(19) Ministry of Finance and National Economy "Economic Survey 1978/79" Khartoum 1979 (Arabic).

(20) Sudanow magazine "JECS, too much, too little, too late" Khartoum, Sept. 1979, p.15.

(21) According to the scheme, minimum wage was supposed to rise from £S 16.50 a month to £S 28.00 a month i.e. by about 70%. Other wages were supposed to increase according to the following: 76% increase in the first 10 pounds of the wage, 60% in the next 10 pounds, 20% in the next 50 pounds, 10% in the next 50 pounds, 5% in the next 50 pounds, and no increase in amounts above that. That is, salaries of £S170 and more were supposed to get an increase of £S 31.1. More details are in the "Economic Survey 1978/79", Ministry of Finance and National Economy, Khartoum 1979 (Arabic).

(22) Ministry of Finance and National Economy "Economic Survey 1979/80" Khartoum 1980 (Arabic).

(23) Ministry of Finance and National Economy "Economic Survey 1974"; Also ILO "Growth, Employment and Equity ..." op.cit.

(24) ILO "Growth, Employment and Equity..." op.cit.

(25) A.R. Thatcher (1976) "Statistics of unemployment in U.K." in G.D.N. Worswick (ed.) "The Concept and Measurement of Involuntary Unemployment" George Allen & Unwin, Ltd. London 1976; Also A.K. Sen (1975) "Employment, Technology and Development" ILO, 1975.

(26) In 1978, for example, there were only 27 employment offices in the country located mainly in large towns. Thus, registration and appointment through these offices in Khartoum alone in 1977/78, amounted to 42% and 44% of all registration and appointments in the country. See Department of Labour "Annual Report 1977/78" Khartoum 1978 (Arabic).

(27) ILO "Growth, Employment and Equity..." op.cit. p.312. and table 66, p.313.

(28) Sudanow magazine "Civil service: less is better" Khartoum, March 1981, p.54.

(29) World Bank "World Development Report" 1981.

(30) This is calculated from fitting the regression

$$\log X_t = a + b \log t$$

where X_t is the GDP at constant 1970 prices and t is index of time. The growth rate is calculated as anti-log b. This follows the method used by the World Bank (1980) "World tables" John Hopkins University Press. In 1973, however, the real growth rate of GDP was estimated to be about 2.0% per annum by ILO "Growth, Employment and Equity.." op.cit.

(31) Ministry of Finance and National Economy "Economic Survey 1979/80" Khartoum 1980, (Arabic)

(32) Bank of Sudan "Annual Report" Khartoum 1979.

(33) ibid, and also Ministry of Finance and National Economy "Economic Survey 1979/80" op.cit.

CHAPTER FOUR

THE SUDANESE MIGRANTS SURVEY

4.1. Introduction

A sample survey was undertaken by the author among Sudanese migrants in Saudi Arabia during April/May 1980 (hereafter called migrants survey) to obtain information about the phenomenon of migration from The Sudan. The purpose of this chapter is to present some detailed notes on how this survey was planned and executed, as well as problems encountered in conducting the survey. The second section of the chapter deals with planning the survey, while its objectives and purposes are discussed in Section 3. Section 4 deals with the formulation of the questionnaire, and how questions were designed, as well as the methodology of the survey. In Section 5 we explain how the field-work was carried out. In particular, the section presents discussion of the pilot survey, the sampling frame and the sampling procedure, as well as the conducting of the interviews. The chapter concludes, in Section 6, by stating some of the difficulties and lessons learned from undertaking such a survey, in the hope that they might be avoided in future research in this area.

4.2: Planning the survey

In view of the absence of detailed information about Sudanese migration for work abroad, it was thought necessary to carry out a detailed survey among Sudanese migrants. The determination of the items on which information was to be collected, the degree of detail to be attempted, and the

ways in which the information could best be obtained, constituted the most difficult part of planning the survey. Careful consideration was given at the beginning to the purpose for which the survey was undertaken, the type of information it was to collect, and the use to which the information was to be put. Since the survey was thought to be the first of its type in the country, it was likely to provide information that would be of use for many purposes. So the first thought was to obtain as much detailed information as possible. However, being aware of the danger of overloading the survey with the collection of different items of information, as well as financial and other constraints, the number of questions asked was rather limited.

Before starting the survey, we studied the work already done by others on the topic and related subjects. Unfortunately no such detailed survey has been undertaken about migration from The Sudan. However, in early 1980, we became aware of two studies in this area, Galaleldin (Dec. 1979) and Abdalla (Feb. 1980). Although both studies are based on survey results, the first does not state how the survey was undertaken and what problems were encountered. The second states that questionnaires were distributed to 500 migrants in their place of work and collected from them, without going into much detail about how this was carried out. This resulted in a response rate of 50% i.e. 250 questionnaires were collected out of the 500 distributed. Nevertheless, both studies gave some insights about how to tackle our problem.

Another problem relating to planning the survey was where it would be best to undertake it, i.e. whether the survey should be carried out in the Sudan or in destination countries. To fully understand the implications of migration to the Sudanese economy, it might well be better to undertake the survey in the Sudan, among returning migrants for example. There was no way to identify these after they return home, unless a large sample survey which included both migrants and non-migrants was undertaken. The financial and time constraints would not allow such a survey to be undertaken. Moreover, since we do not know the geographic origins of migrants in The Sudan, it would be very difficult to know where to undertake such a survey. Furthermore, because of the recent nature of migration, returning migrants were thought to be very few. Thus the possibility of undertaking the survey in The Sudan was eliminated. The alternative was to undertake the survey at the receiving end of the migration stream. However, given the limited time and resources, it was not possible to undertake a survey in each country receiving Sudanese migrants, and thus only one country had to be chosen. Saudi Arabia was chosen for this purpose, mainly because about 70% of Sudanese migrants migrate to Saudi Arabia (Chapter Two). Given this fact, and the similarity in economic conditions in all receiving countries, it was hoped that a survey among Sudanese migrants in Saudi Arabia would be fairly representative. Of course it was not possible to undertake a survey which would cover all towns in Saudi Arabia. Riyadh city, being the capital and the largest city in the country was chosen for this purpose.

4.3: Objectives

The principal objective of the survey was to collect information about some problems relating to Sudanese emigration abroad, in order to test some hypotheses relating to this phenomenon. In particular, data was collected about the personal and demographic characteristics of migrants, their incomes abroad and at home, their savings and remittances from abroad, and many other related subjects. A detailed investigation along these lines has been lacking. The documentary information about Sudanese migration is not only scarce and unreliable, but also proved to have serious limitations (Chapter Two). The only available information about migration was that obtained from the Department of Labour in The Sudan. This proved to be inadequate, understates the number of migrants and lacks the necessary detail needed in any study of migration. It was virtually useless for deriving any information about future behaviour, and of little value in uncovering motives, opinions and other information usually found by careful questioning.

In addition to the demographic information about migrant's characteristics, information about their incomes, savings, remittances, and intended use of savings in The Sudan was also collected. To fully understand and investigate the implications of migration for the Sudanese economy, information about these matters is necessary. Migrants do not affect the home economy only by their absence, but also through their savings, remittances from abroad, and what use these remittances are put to at home. Thus information about

migrant's propensity to save, as well as their propensity to remit home are very valuable in this respect. Information about migrant's employment, both abroad and at home, should be useful in assessing skill gains from migration, and the implications of returning migrants for the labour force in the home country. Information on other, and related subjects was also collected. In summary, the main objectives of the survey could be stated in the following general points:

(a) To measure the level and trends of migration streams from the Sudan.

(b) To establish and measure the demographic and socio-economic characteristics of migrants.

(c) To explore and investigate the motives for migration.

(d) To study the implications of this migration for the economy of the country as a whole, as well as for the individual migrant and non-migrant.

(e) To help formulate sound economic policies towards migration.

Questions should be designed to obtain information about these objectives for the purpose of testing hypotheses relating to these matters. Thus, the second stage of the survey is to formulate a questionnaire which is capable of obtaining most of the required information.

4.4: Formulation of the questionnaire

For the purpose of undertaking this survey, a questionnaire was designed and prepared at Stirling University, and some

refinements were introduced after the results of the pilot survey. Since Arabic is the common language used by migrants, the questionnaire was translated into Arabic before carrying out the survey. The general approach in designing and preparing the questionnaire took the following into account.

(a) Simplicity: In a survey, it should not only be easy to interpret and communicate with the respondent, but it is also essential that the question is easily understood without ambiguity. This was more important in our survey, taking into account the wide differences in the levels of education expected among migrants from a population with low levels of literacy, like the Sudanese population. In such a case 'difficult' wording would cause confusion to the respondent. Thus each question aimed to be as simple and direct as possible.

(b) Arrangement of questions was carefully planned. Questions more likely to raise the interest of the respondent were placed early in the schedule, the rationale being that, if the interest of the respondent was aroused and he became involved, he would be willing to continue with questions that might be less interesting or that required patient thought. The more 'sensitive' questions, such as those relating to incomes, savings and remittances, were placed towards the end of the questionnaire.

(c) Most questions had structured answers to allow answering by ticking the appropriate answer. This however did not apply to question 16, concerning intended use of savings at home, since we were interested in obtaining as much

detailed information as possible, and we did not want to severely restrict the respondent.

(d) Answers were meant to be objective and capable of tabulation.

Having finished planning the survey, defining its objectives, and designing the questionnaire, what remains is to undertake the field work and conduct the survey. The following section explains how this was done.

4.5: Field-work and related aspects

To undertake the field-work, the first task would be to secure finance for this purpose. Finance, however, was one of the major constraints in conducting the survey. This played the major role in limiting the sample size to only 400 respondents. Before the execution of the survey, however, it is also important to improve the questionnaire and make sure that the questions would lead to the required information. A pilot survey, before undertaking the proposed survey, was helpful in these matters. Having done this, and before conducting the survey, one needs to select a sampling frame and a sample to identify the respondents for the purpose of the survey. After the pilot survey, and the selection of the suitable sample, then comes the conduct of the survey itself. This sections deals with these main problems of the field-work, and shows how they were carried out.

4.5.1: The pilot survey

Before undertaking the full survey, a pilot survey was carried out after the completion of the questionnaire. The main items to be tested with the help of this, were the suitability of the design and the wording of the questionnaire. It is only by trying a question and being able to examine the full response to it, that one can discover whether the question is clear or not. Our aim here was to make the questions easily understood by the respondent, willingly answered by them, and taken by the whole population unambiguously to mean the same thing. Additional benefits of the pilot survey were to determine:

(a) ways in which to word questions to obtain precise data. This involved the function of the question, whether to collect facts or opinions, and whether to do this by open or closed questions.

(b) ways of putting the subject to the respondent to achieve a high response.

(c) the best layout of the schedule so as to make it manageable.

(d) Since we are using structured answers in the questionnaire, such a pilot survey was hoped to indicate answer choices which are meaningful to the respondent, which do not overlap, which include the full range of possible answers, which do not seem to be very restrictive, which do not suggest answers, and which are clearly relevant to the purpose of the questionnaire.

(e) the length of time required to complete the questionnaire.

Given the financial and time constraints, and problems of exit and entry to Saudi Arabia, there was no way to supervise the pilot survey myself. Some of the schedules of the questionnaire (50) were sent to my brother and friends in Saudi Arabia, explaining to them the purpose of the pilot survey, and how it could be carried out, asking them to undertake this and return the filled questionnaire to me. After receiving these, I went through all the answers to see how clear the questions were, and whether there was any ambiguity. A few questions needed re-wording to give a more precise meaning, and a few needed to be re-ordered. Some questions, particularly those on demographic aspects, were more easily understood by the respondents than others, such as those on economic aspects. This suggested that we add a definition of income, and remittances to the questionnaire. The sensitive questions, concerning income and so on, were moved to the middle of the schedule. However, since we could not undertake the pilot survey ourselves, some of the aims, like the length of time needed to complete the questionnaire were left unanswered. The schedule of the questionnaire is in Appendix C.

4.5.2: Sampling and the sampling frame

The most difficulty was experienced in finding a suitable sampling frame from which to draw a sample for the survey. The Sudan, as well as the whole Arab region suffers from the

lack of recorded information. In The Sudan it was not possible to find any sort of address list, or any type of record about migrants in Saudi Arabia. The Sudan Embassy in Saudi Arabia, again had no records whatsoever, nor the Saudi authorities (who were unwilling to release any information even if they had it). The only suitable information was found with the Sudanese Association Committee (SAC) in Riyadh. The Association is formed to look after the social welfare of Sudanese there, and it keeps records of names and addresses of its members. This type of information, however, is not complete and is not up to date. This is because it is optional for the individual to join the Association, and there is the possibility that some are not members, and thus they would be excluded if the sample is based on this information only. Moreover, new migrants might need some time to get information about the Association and decide whether to join or not. The alternative to this was a list of Sudanese clubs, in which some social activities are undertaken, and which are used as a residence by some members of the club. I learned that there are over 100 such clubs in Riyadh city, with addresses known to the SAC, each with a membership of 20-40 persons. It was quite possible to base the whole sample on these clubs. However, I learnt that the majority of members are workers who are either single or unaccompanied by families, and who came to live together in these clubs so as to reduce their cost of living

and housing. In this way it would exclude migrants accompanied by their families, as well as those who live separately. Furthermore, these clubs are based on geographical origins in The Sudan. That is some members of a village, township or an area in The Sudan, would come together and form a club. So, basing the whole sample on these would introduce a bias in the sample towards a certain type of migrants. The alternative to all this was to distribute the questionnaire among migrants in their places of work. However, apart from the difficulty of knowing exactly their places of work, basing the whole sample on this would be too costly and time consuming in relation to the limited resources and time available, as well as it would exclude the unemployed migrants. Taking all these problems into consideration, it was considered most appropriate to divide the sample equally between the two groups. One part would be based on a sample drawn from these clubs and the other on a sample drawn from migrants in their places of work. To obtain a sample of these clubs, 20 clubs were selected from a list of addresses of 100 clubs, using simple random sampling, with the help of random number tables. From each selected club, 10 migrants were to be interviewed. The greatest difficulty, however, was experienced with the second part of the sample, since it was very difficult to list all places in which the Sudanese in Riyadh work. This is especially true in the case of migrants working in private houses. However, the SAC was again helpful in providing such a list, although it might

well be incomplete. From this 30 places were selected, and the questionnaire was distributed among migrants while at work.

It was generally felt that if the SAC was convinced of the value and purpose of the survey, it would be helpful, not only in conducting the survey, but also in the publicity aspects of the survey. So the survey and its purpose were explained in detail to the committee, who in turn discussed these with their friends. The value and purpose of the survey was also explained and discussed in a general meeting of the association members to give some publicity to the survey.

4.5.3: Conducting the survey

Given the limited resources available to employ interviewers, the survey was conducted mainly by myself. The amount of money available would not allow employing even one interviewer. However, the help of two friends was obtained in this respect, to whom the purpose of the survey was fully explained. They were also carefully trained in how to conduct the interview and fill in the questionnaire, and they were given some questionnaires to undertake part of the interviewing. However, since they had their own jobs, this meant doing the interviews in their spare time. The SAC was very interested in the survey, and very helpful too. The committee was able to assign a car for me, and someone each day to drive me around to the chosen addresses. This, however, was

again limited by the spare time available to them.

To save time the questionnaire was distributed among the chosen sample, and left with the respondent to complete. In some cases, the respondent would be ready for interviewing on the first visit, in which case I would undertake the interviewing myself. A maximum of three visits was possible for each respondent. The questionnaire would be handed to the respondent on the first visit and collected on the second visit if an interview did not take place on the first visit. A third and final call is made if the questionnaire was not completed in the first two visits. Only three respondents refused to answer completely. However, it was not possible to get hold of some respondents after the first visit because they were not found at their places of work or residence. In this way, from a total of 400 schedules, 310 were collected and found suitable for analysis. This implies a response rate of 77.5%, which is reasonably good, given the most difficult field conditions.

Thus, although no definite claim can be made that the sample was particularly typical or representative of migrants as a whole, given the difficulties under which the survey was undertaken, it could be said that we made the most out of what was available. A proper large random sample would have extended the survey beyond the resources and time available. The choice of the sample size was necessitated from the start by the limited facilities and time available in relation to the task to be undertaken.

4.6: Some difficulties and lessons learned

As ours is one of the pioneering surveys in this area of study in the country, some of the difficulties and lessons learned with regard to the questionnaire, the field-work and related aspects, might be useful for those undertaking similar surveys in the future. Some of these are briefly discussed below.

(a) The determination of the details of the information to be collected constitutes one of the main difficulties in planning the survey. The detailed problems which arise in determining what information is necessary and how it is best obtained is not an easy task. The basic problem is essentially that of the selection of the most relevant items of information from all those which it is possible to collect. Thus, apart from some theoretical background to indicate what information might be relevant, a careful planning of the aims of the survey and its purposes is essential before undertaking a survey.

(b) In this survey, it would have been useful if the survey could have been undertaken with the help of interviewers, who could be trained and well informed about the survey and how to conduct it, and who could easily be supervised. This would certainly have resulted in a higher response rate, and probably in better quality answers.

(c) To obtain some co-operation from the Saudi authorities, it might have been better if the survey was conducted

with the help of an institute in Saudi Arabia. A survey conducted in collaboration with the University of Riyadh, for example, would not only secure permission of the authorities to undertake the survey, but might also result in a good co-operation from the authorities.

(d) It is needless to mention the importance of a proper sampling frame to draw a sample from. This, however, is very difficult to obtain in many developing countries.

(e) It might be helpful to undertake a survey among returning migrants, in order to fully understand the implications of migration for the country. In particular, information about how migrants actually spent their savings and remittances, and how they used their gained training and experiences, might be helpful in this respect, rather than information about the intended use of savings and remittances.

In spite of the above mentioned problems, and the limited facilities available, the questionnaire was comprehensive and determined efforts have been made to make the survey as complete, representative and comprehensive as possible.

CHAPTER FIVE

CHARACTERISTICS OF MIGRANTS

Introduction

The available documentary information about migration from The Sudan and the characteristics of migrants was discussed in Chapter Two. Such data was found to be inadequate, unreliable, and lacking the necessary detail for a migration study. Thus a survey among migrants was undertaken to supplement the available information. Chapter Four dealt with the aims, planning, methodology and other aspects of this survey. The purpose of this chapter is mainly to reflect the findings of this survey as far as migrant's characteristics are concerned. These include the age and sex composition of migrants, their marital status, regional origins, educational attainments, and other related topics. All the data in this respect, unless otherwise stated, refer to the results of this survey.

5.1: Distribution by age and sex

As expected, migrants tend to be of young working ages. They tend to be concentrated in the 20-44 years of age, 97% of migrants in the sample being in this age category. Moreover, it seems that there is more tendency for concentration at the 25-34 age groups, with 61% of the sample being in this age group, while 36% are in the 25-29 age group. Migrants under 20 years are a very small proportion, making less than 1% of the sample, with the minimum age being 17 years. This low proportion of migrants under 20 could be explained by the migration laws in the immigration countries. These

require a minimum age of 17 years for imported labour.

The female migration for work seems to be non-existent or negligible. Only one female in the sample of 310 migrants was found. This should not be surprising since, as noted in Chapter Three, females have low participation rates. With socio-cultural factors inhibiting females to go out for work in The Sudan itself, it would also inhibit them from migrating for work abroad in a region having the same social attitudes towards females going out for work. This, however, does not deny the migration of accompanied wives and children. These, however, are believed to be small in number because of regulations in the immigration countries which discourage families from joining migrants. In general, then, it seems that migration does not only select from the young active population, but mainly from the male labour force.

5.2: Marital status

Generally, it seems that the proportion of single migrants in the sample is relatively higher than the married ones. While 55% of migrants in the sample are single, only 45% of them are married. Moreover, only 15% of the sample or about 33% of married migrants are accompanied by their wives and families abroad. With migration selecting from the young, and migration laws discouraging migration of families, it is natural to find such marital status of migrants. Moreover, taking the family abroad would increase

expenditure abroad, and therefore only able migrants would take their families abroad. Furthermore, the process of selecting migrants would prefer either the single or those who are unaccompanied by their families. For example, employers abroad are usually responsible to their governments for the labour they import, the 'kafeel' system as discussed in Chapter Two, and therefore they try to reduce costs by selecting single or unaccompanied migrants.

5.3: Regional origins

The majority of migrants seem to be born in the rural areas of the country. 71% of the sample reported rural areas as their place of birth. However, the majority of them were residing in the urban areas before migrating abroad, some 81% of the sample stating urban areas as their last place of residence before migration. This would indicate a step migration; from the rural areas to the urban areas, and then from urban areas to other countries. The proportion of these who were residing in urban areas, of those who were born in rural areas, increases considerably with the level of education. This indicates a higher propensity to migrate to urban areas in the country for educated people. That rural to urban migrants in The Sudan are basically young educated males was also noted by internal migration surveys in the country (Galaleldin 1973 and ILO Survey 1974). Urban to rural migration on the other hand seems to be very negligible, since only 1% of those born in urban areas were

residing in rural areas before migrating abroad.

As for the geographical origins of migrants, it seems that most migrants were originally born in four provinces, The Northern, Khartoum, Gazera and the Nile province (Table B1). However, most of these were resident in Khartoum province before migration abroad. Khartoum and Gazera provinces are usually the receiving province of migrants from other provinces (Chapter Two and Table A5), while the Northern province is traditionally the sending province. There is a complete absence of migrants abroad from The Southern provinces of The Sudan. As noted in Chapter Two this region does not seem to participate in internal migration to the northern region either. The differences in race, religion, language, and culture between the Southern region and other AOPEC could be expected to work as strong deterrent to migration from the southern region to these countries.

5.4: Education

The literacy rate among migrants seems to be quite high. Table 5.1 overleaf shows the distribution of migrants in the sample according to their levels of education.

It is clearly seen from the table that the literacy rate among migrants amounts to about 90% of migrants in the sample. Moreover those with above secondary levels of education represent a considerable proportion of migrants, being over a quarter of the sample. With the low literacy rates among the indigenous population as seen in Chapter Three, it is certain that such a proportion of educated labour force

Table 5.1: Migrants by level of education.

Level of education	Number	%
Can't read or write	30	10
Primary	71	23
Intermediate (general secondary)	38	12
Secondary (Higher secondary)	82	26
Higher institute	28	9
University	45	15
Post-graduate	15	5
Not classified, student	1	-
All sample	310	100

Source: Migrants Survey.

would not hold for the home population. These educational attainments of migrants indicate that migration selects mainly from the relatively educated manpower in the country.

5.5: Occupation abroad and in The Sudan

The proportion of migrants taking unskilled jobs while abroad is the highest among all types of occupations abroad, making about 31% of the sample. The occupational composition of migrants abroad, however, does not seem to differ much from that at home, although some differences occur. These are reflected in Table 5.2 overleaf.

Table 5.2: Occupation abroad and in The Sudan

Occupation	Abroad		in Sudan	
	No.	%	No.	%
Unskilled worker	97	31	41	13
Farmers	..	..	29	9
Skilled worker	50	16	62	20
Clerks	28	9	26	8
Accountants	48	15	38	12
Technicians	28	9	34	11
Professional & administrative	42	14	45	15
Unemployed	17	5	35	11

N.B.: .. indicates no observation in the sample.

Source: Migrants Survey.

The table shows that while 22% of migrants in the sample had an unskilled job at home (including farmers), this proportion rises to about 31% among migrants abroad. Generally it seems that occupations are down-graded when migrants work abroad, and migrants usually take lower-level jobs abroad than they had at home. For example, while 20% of migrants in the sample had skilled occupation in The Sudan, only 16% have skilled jobs while abroad. Put in another way, of those who have been working as skilled labour in The Sudan, only 61% do so abroad, while 26% of them are classified as taking unskilled jobs (Table B2). In general, however, the majority of migrants in the sample had an occupation at home that required some skill. This probably indicates

that the migration process tends to select from the skilled manpower in the country.

5.6: Employment sector abroad and in The Sudan

Migrants in the sample, while abroad tend to be concentrated in the services and the trade sectors. While in The Sudan, a considerable proportion of them seem to have been working in the services sector too. Table 5.3 below shows the employment sector of migrants, both in the Sudan and abroad.

Table 5.3: Migrants by employment sector abroad and in The Sudan before migration

Sector	Abroad		In Sudan	
	No.	%	No.	%
Agriculture	1	-	39	13
Construction	13	4	14	4
Electricity and water	12	4	7	2
Commerce	80	26	13	4
Transport and communications	23	7	31	10
Finance	31	10	5	2
Services	88	28	107	35
Manufacturing	8	3	47	15
Minerals and oil	3	1	1	-
Domestic servants	26	8	1	-
No job or answer	25	8	45	15

- indicates less than 1% of the sample of 310.

Source: Migrants Survey.

The table indicates that the services sector is the leading employing sector for migrants both at home before migration and abroad. However, the differences in employment sector are also clear. While 13% of migrants in the sample were involved in the agricultural sector before migration, almost none of them is in this sector abroad. Furthermore, the table shows that 15% of migrants were employed in the manufacturing sector at home, against only 3% abroad. Thus, it seems that migrants not only change their occupations abroad, but also their employment sectors. These changes could also be seen when sectors of employment are divided into the broader public and private sectors of employment. Table 5.4 below shows this:

Table 5.4: Migrants by public and private sectors of employment abroad and in Sudan

Sector	Abroad		in Sudan	
	No.	%	No.	%
Public sector	174	56	175	56
Private sector	114	37	47	15
Self-employed	2	0.6	52	17
No job or answer	20	6	36	12

Source: Migrants Survey.

The public sectors both abroad and at home set out to employ the majority of migrants. The private sector abroad, however, seem to employ larger proportions of the migrants than in The Sudan. The self-employed migrants tend to be non-existing abroad, while they are of a considerable proportion

in The Sudan. This probably stems from the regulation that no migrant labour abroad is allowed to establish his own business in most immigration countries unless as a partner with a citizen of the country itself. This partly explains the small proportion of those reported as self employed abroad.

5.7: Ways of entering Saudi Arabia

Rules which regulate migration officially were discussed in Chapter Two, Section 2.5. In practice, however, people might use many means of migration other than the official channels. The purpose of this section is to investigate the channels used by migrants in practice, and whether they differ considerably from the official migration channels. Table 5.5 below shows the main means by which migrants in the sample have entered Saudi Arabia.

Table 5.5: Ways of entering Saudi Arabia

Ways/means	No.	%
Work contract or work visa	189	61
For Haj, Omra or a visit	80	26
Through other countries	25	8
Other ways	2	0.6
Did not state	14	5
All sample	310	100

Source: Migrants Survey.

The table clearly indicates that the majority of migrants in the sample, some 61% entered Saudi Arabia with a work contract or a work visa in the first place. If all those who migrated without a work contract or work visa are considered as illegal migrants from The Sudan, this would indicate an illegal migration rate of about 39% of the migrants in the sample. However, some of those who stated that they entered Saudi Arabia with a work contract might be afraid to state otherwise, even if they actually entered without a work contract. Thus the true illegal migration rate might be well above the observed 39%. Moreover, not all those who migrated with a work contract did so through the Labour Department in The Sudan. Furthermore, some of the work contracts might have been obtained illegally. This raises the question of how work contracts or work visas are obtained by migrants. Table 5.6 below gives some indication on this.

Table 5.6: Ways of obtaining job contracts

Ways/means	No.	% of all sample	% of work contracts (a)
Labour Exchange Office in Sudan	33	10.6	17.5
Employment missions to Sudan	29	9.4	15.3
Private employment agencies	5	1.6	2.6
Relatives and friends	93	30.0	49.2
Official secondment	17	5.5	9.0
Other ways	3	1.0	1.6
Did not state	9	2.9	4.8
All	189	61.1	100.0

N.B.: (a) % of those who entered with a work contract.

Source: Migrants Survey.

The table clearly indicates that the main way of obtaining work contracts is through relatives and friends abroad. These provide work contracts for about 30% of the sample or nearly 50% of these who migrated with a work contract. These are compared to 11% and 18% respectively obtaining their work contracts from the Labour Department in The Sudan. This probably indicates the limited involvement of the Sudanese Labour Department in the migration process, confirming that the statistics from the Labour Department could considerably understate the number of migrants abroad.

5.8: Job information channels

It seems that friends and relatives are not only important sources of obtaining work contracts or work visas, but they are also important in providing information about job opportunities abroad. About 51% of migrants in the sample stated that they received information about their first job abroad from relatives and friends abroad (Table B6). This compares to 11% obtaining their information from the Labour Office in The Sudan, 11% from newspapers, 9% through direct contracts with their employers and 2% through private employment agencies. It seems that relatives and friends are particularly important in providing information for migrants with low levels of education and skills. Presumably, migrants with high levels of education and skills are more able to obtain and analyse information from other sources.

The time spent in first job search abroad seems to be short. Migrants who were able to find their first job in

less than a month were about 53% of the sample, while those who found their job in one to two months were about 16% of the sample. Those who stayed more than six months to find a job were only 5% of the sample (Table B7). The time spent in first job search, however, should be minimal since migrants - at least officially - are supposed to have migrated with a work contract. The longer time spent searching for the first job might be attributed to illegal migration, as well as the way in which the job contract is obtained. The illegal migrant might find it difficult to obtain a job. In fact only 34% of those who entered Saudi Arabia for a visit or Haj were able to obtain a job in the first month of their arrival, compared to 67% of those who entered with a work contract. However, the fact that 67% of those who entered with a work contract obtained their jobs in the first month would indicate that some work contracts are obtained illegally, and actually the migrant is offered a work visa rather than a specific job. For example only 40% of those who obtained their work contracts from relatives and friends were able to find a job in less than a month, compared to 100% of those who obtained their work contracts from the Labour Office in Sudan. Thus the time spent in first job search seems to depend not only on the demographic characteristics of migrants, but also on the way in which the work contract is obtained. Generally speaking, however, the short time spent in first job search would indicate a low magnitude of income foregone by migrants during this job

search time. Migrants, however, do not only spend time searching for jobs, but might also change their jobs in search of better ones. About 33% of migrants in the sample had changed their jobs at least once since migrating abroad (Table B8). It should be pointed out, however, that the usual practice in changing jobs is that the migrant would be working at his present job and at the same time searching for another job. In this way time spent during changing job would be greatly reduced.

5.9: Period since out-migration and the intended period of migration

Sudanese migration for work abroad, as discussed in Section 2.3, seems to be a recent phenomenon. The migrants survey reveals that most of the migrants in the sample, 38% had a year since out-migration from The Sudan. This proportion decreases with the increase in the period since out-migration to reach 15% of the sample having more than 5 years since out-migration (Table B17). However, it should be pointed out that this is not a conclusive evidence that migration is a recent phenomenon, since some migrants might have returned home after a certain period of migration. This is quite possible since it seems that migration from the country is of a temporary nature. Less than 1% of all migrants in the sample stated that they intend to stay abroad forever. However, about 35% of migrants stated that they intend to migrate for a period of between 5 to 10 years, with the majority of this group intending to migrate for about seven

years. Those who are not sure when they will return home make about 29% of the sample, while 25% of the sample stated an intended period of migration of less than 5 years (Table B18). In general, however, it could be said that the intended period of migration is somewhere between five and seven years. This, however, would differ according to the migrants characteristics and the like. When broken down by occupation, for example, it seems that migrants with lower occupational levels tend to plan a longer migration horizon than those with higher levels of occupations. Moreover the proportion of those who do not know when they might return home seems to decrease with the increase in the occupational levels. This tends to support the hypothesis that those with low occupational and educational levels tend to take longer to fulfil their aspirations and expectations than those with higher levels, probably because of their relatively lower incomes. However, this would depend also on the conditions in the migrants' work contracts.

5.10: Migrants' future intentions

Since migration seems to be of a temporary nature, questions would arise about migrants' intentions when they finally come home. Among these is the intended location of settlement at home. According to the survey, most intend to settle in urban areas. Table 5.7 overleaf gives some indication of these future places:

Table 5.7: Intended settlement of migrants on return home

Area of intended settlement	No.	%
Khartoum	187	60
Other large towns	65	21
Rural areas	37	12
Don't know yet	11	4
No answer	10	3

Source: Migrants Survey.

It is clear from the table that Khartoum, the capital city, is the main target of future settlement. Added to Khartoum are other large towns, and thus intended urban settlement is about 81% of migrants in the sample. On the other hand, the proportion who intend to settle in the rural areas, 12%, is lower than the proportion of those who were resident in these areas before migration, 19%. This indicates that migration abroad would induce urban settlement on return rather than rural settlement. This indicates a widening gap between urban and rural areas, especially if migrants invest their savings where they intend to settle. The investigation of what migrants intend to do on return, then, would be of interest. Table 5.8 overleaf gives some indication about this.

Although a considerable proportion of migrants in the sample, as indicated in the table, is not sure yet of what they will do on return home, it is clear that nearly half intend to establish their own business on return home. A

Table 5.8: Migrants' intended future employment on return home

Intended employment	No.	%
Go back to previous job	22	7
Look for another paid job	6	2
Establish own business	152	49
No intention to go back	0	0
Don't know yet	114	37
No answer	16	5

Source: Migrants Survey.

very small proportion intend to go back to their previous jobs. The majority of these, however, are those on official secondment who have their jobs and positions still kept for them at home. It is clear from the table, moreover, that the proportion of migrants who intend to go back to paid employment on return are very small. This suggests that establishments in the Sudan from which the migration occurred cannot expect the returning migrants to work for them again.

5.11: Summary and conclusion

The discussion presented in this chapter suggests that migrants are basically young, educated and skilled males. The majority of migrants in the sample are in the young working ages. Moreover, the literacy rate seems to be quite high, with considerable proportions of them with high levels of education. The evidence not only suggests that the

literacy rate is high among migrants relative to the economically active population of The Sudan, but also that migration occurs mainly among the educated labour force. Furthermore, the skill composition of migrants seem to suggest that migration selects mainly from the skilled manpower, with more than two thirds of migrants in the sample having had a job in The Sudan requiring some sort of skill. Migration however, seems to be of a temporary nature, in the sense that all migrants intend to return to The Sudan after some time abroad. The planned period of migration, although tending to differ according to the characteristics of migrants, generally seems to be between five and seven years. On return home, however, most migrants seem to have the intention of settling in urban areas rather than in rural areas. The proportion who were resident in the rural areas before migration is higher than that who intend to settle in these areas after return home.

CHAPTER SIX

IMPLICATIONS OF MIGRATION: A GENERAL DISCUSSION AND A REVIEW OF LITERATURE

6.1. Introduction

The aim of this chapter is to point out the implications of migration, by reviewing the theoretical and empirical studies dealing with these impacts. Various types of model have been proposed to analyse these effects. They differ, however, in their coverage, scope and in their aims. These studies have dealt with the implications for the economies of both immigration and emigration countries or the economy of one of them. The implications for the receiving country's economy are well discussed, especially in the case of migration into West Europe (e.g. B. Thomas 1954, UN 1953 and 1973, Kindleberger 1967, C. Jones 1977, etc.). In this chapter, emphasis is put on the implications for the economy of the country sending labour abroad, i.e. the emigration country. Section 2 presents a summary of some studies in this respect, along with their criticism. In Section 3 a more detailed discussion of possible consequences of migration is presented. The main macro-economic effects of migration are identified along with the theoretical bases underlying their effects. Migration could have different implications for the individual than for the economy at large. Section 4, presents a discussion of the effects of migration on the individual, both migrant and non-migrant. The summary and main conclusions are presented in Section 5.

6.2. Migration Studies:

Depending on the type of migration, whether permanent or temporary, and the type of variables considered, migration studies have reached different conclusions about the possible effects of migration. Some studies were optimistic and suggested that migration abroad could contribute positively to the development process of the home county. Others, however, have considered migration to be detrimental to the economic development process. An optimistic view about the role of migration on the sending country's economy is provided by Friedlander (1965), in his analysis of migration from Puerto Rico. He stresses that migration cannot only provide positive benefits to the emigration country, but can also stimulate economic growth, especially when it is coupled with large scale foreign investment. He suggests a model in which unskilled labour is removed from the economy while production remains stable. Thus the model assumes an agricultural economy whose land is all cultivated and which has an excess supply of labour. As a consequence of removing the unskilled labour, per capita income and productivity accelerate comfortably ahead of population growth, leading to more economic growth. However, apart from the restrictive assumptions of the model, the model pays very little attention to the feedback effects of migration, and assumes that all migrants are unemployed unskilled labour. There are other authors, like Michalopoulos (1968), who look on migration in a similarly favourable light, contending that as long as

migration reduces unemployment at home and increases per capita income, its effects are positive.

Kindleberger (1965) analysed the effects of migration on a number of variables, like the production foregone, gains in training, the impact of rising wages as a result of migration, etc. Although the analysis is much more detailed, he normally assumes that migrants are the agricultural under or unemployed labour, rather than the skilled employed labour. Moreover, based on migration from Southern Europe to Northern Europe, he puts more emphasis on possible gains in training and experience by migrants abroad.

One of the most comprehensive analyses of the economic consequences of migration is that of Paine (1974). She enumerates eight key factors which determine whether migration will generate sustained economic growth, along the framework proposed by Kindleberger. These are (Paine P.49)

(1) occupational composition and skill levels of migrants
(2) suitability of skills gained abroad to the home country
(3) remittances from abroad
(4) the extent of investment of remittances in productive use
(5) the extent to which remittances are spent on imports
(6) the effects of remittances on the price level
(7) the implications for trade between the host and the home country, and
(8) the proportion of migrants who settle abroad permanently.

In the light of these factors, she identifies two extreme cases of migration effects; one case is favourable for

economic growth, and the other describes conditions which could result in migration being detrimental to economic development. To which extreme a country approximates would depend on the outcome of the above eight key factors. The identification of an economy's position between the two cases indicates little about whether the economy benefits or loses from migration. The two hypothetical cases are too extreme. One assumes that only the unskilled unemployed labour are migrating, while the other assumes that it is the skilled employed workers who are migrating. In practice, however, a combination of both these types of labour usually migrates. If this is the case, then the country's position would approximate to neither of these two cases, and thus no clear conclusions could be reached about the net effects of migration.

Taking the migration of skilled labour, Bohning (1975) cites many arguments against exporting skilled labour. He argues that it is an unnecessary waste of resources to train someone and then lose him to another country unless the home country benefits through remittances or eventual return of migrants. He argues that remittances contribute to increased consumption at home, and thus foreign exchange earned through remittances is spent on imported goods. However, the study ignores other positive effects, such as possible productive use of remittances, or migration of the unskilled and unemployed, etc. The study, moreover, puts more emphasis on permanent migration, claiming that these usually make the largest proportion of migrants.

In summary, it seems that there is far less agreement about the consequences of migration for the sending country's economy. Indeed it is possible that different consequences could be obtained under different assumptions. The ultimate consequences would depend on which type of migration is analysed, and which variables are taken into consideration. However, it seems that most of these studies state one or more variables as a possible consequence of migration. These include manpower losses, reduction in unemployment, remittances from abroad, and many others. In the next section these are discussed in more detail.

6.3: Possible gains and losses due to migration

The discussion in the above section suggests some of the migration consequences on the economy of the home country. For the sake of clarity, these are summarised in Table 6.1 below.

Table 6.1: Possible gains and losses due to migration for the economy of the labour exporting country.

Gains	Losses
1. Remittances from abroad	1. Inflationary effects of remittances.
2. Reduction in unemployment.	2. Outflow of human capital.
3. Decline in consumption.	3. Foregone production.
4. Gained training and experience by migrants abroad.	4. Danger of forced massive repatriation.
5. Efficient allocation of human resources.	5. Demographic consequences.

It is worth mentioning that these are not all possible gains and losses due to migration. While others are identified in the following discussion, these seem to be the most general and commonly identified effects. In the remainder of this section we present a detailed discussion on these possible gains and losses. In doing so, we formulate a framework which is used in the next chapter to analyse the effects of labour migration from The Sudan on the economy of the country.

6.3.1: Reduction in domestic unemployment.

There is no doubt that the migration of the unemployed leads to reductions in domestic unemployment directly. The migration of the already employed may reduce unemployment indirectly if their places could easily be filled by suitable unemployed. Migration may also reduce unemployment and/or underemployment through its feedback effects. The reduction in social expenditure and consumption resulting from the departure of migrants, as well as the resulting savings and capital formation due to remittances, could be channelled to more investment, in theory at least, and thus more jobs could be created. However, reductions in domestic unemployment and/or underemployment would depend on many factors. Suitable replacements for those already employed who migrate abroad might not be available. Obviously labour is not homogeneous, and in view of the selective migration process, it is possible to have on balance in the sending country, surplus labour, mostly unskilled, while simultaneously shortages of skilled

labour. Under such conditions migration may adversely affect output in the sending country in spite of the existence of high rates of unemployment and/or underemployment. Thus, the net gains from reductions in unemployment would depend, among other things, on the type of labour actually migrating, i.e. whether the employed or the unemployed, on the productive use of remittances, and on the occupational composition of the migrants.

6.3.2: Gains in foreign exchange, and the effects on the balance of payments

One of the most important benefits to the emigration country is said to be the migrant's remittances from abroad. Remittances from abroad may represent a sizeable source of foreign exchange earnings to the country. Indeed the existing evidence suggests that these are making considerable sums for countries like Turkey, Yugoslavia, Greece, Portugal, etc. (Eldridge 1966, Nikolic 1972, Paine 1974, Chandavarker 1980, etc.). In view of the fact that inadequate foreign exchange earnings may constitute, in many developing countries, one of the major constraints on the process of economic development, one can hardly underestimate the importance of remittances in this respect. However, it should be pointed out that, unless migration continues indefinitely, remittances cannot be considered a steady source of income and foreign exchange receipts. Moreover, if migration resulted in changes in the consumption habits of migrants, non-migrants or both towards more imported goods, then much of the remittances might be

spent on imports with no improvement in the balance of payments of the country. Furthermore, remittances might not contribute very much to official foreign exchange earnings if they are not sent through the banking system, but rather secretly through a 'black market' of foreign exchange. Such 'black market' dealings could exist to maintain demands of non-migrants for foreign currency, especially if there are controls on exchange transfers out of the home country because of shortages of foreign exchange.

Remittances, moreover, do not only affect foreign exchange receipts. They might also form a sizeable surplus capital which could provide the necessary physical and working capital for the economic development process. This however would depend on the use these remittances are put to at home. The existing evidence suggests that savings and remittances from abroad are often utilized not in productive investment, but largely in consumption expenditure. The increased consumption as a result of remittances could lead to price rises in the home country if the demand is not met. Although this would depend on the marginal propensity to consume, the extra demand is likely to have inflationary consequences if there is no spare capacity to produce the additional commodities in the short run. Given the supply bottlenecks faced by many developing countries the danger of inflation is almost certain.

Migration does not affect the balance of payment through remittances alone, but also through effects on imports, exports and the exchange rate of the emigration country. Or

as put by Paine (1974) "emigration is not only a way for the sending country to fill its exchange gap, without affecting the size of this gap". Imports could rise as a result of a change in consumption habits towards more imported goods. Exports may rise if migrants abroad demanded more of their home country's products, or if these products became known abroad as a result of migration. The exchange rate would be affected if, in order to persuade migrants to send more remittances through the official channels, the exchange rate offered to them is undervalued.

In conclusion, it seems that the overall impact of migration and remittances on foreign exchange earnings and the home country's balance of payment, involves a set of basically empirical questions. These include the size, extent and frequency of remittances, and the use they are put to at home, as well as changes in consumption habits and price levels brought about by these remittances, and the implications of migration for the imports, exports and exchange rate of the home country.

6.3.3: Reduction in consumption and foregone production

The direct contribution of remittances to foreign exchange and the indirect ones to savings and capital formation in the emigration country, might be supplemented by a reduction in domestic consumption and social overhead expenditure resulting from the absence of migrants and their families. The resulting savings could be channelled to more investment, and thus facilitate rapid economic growth. However, this

reduction in consumption might not be effective if, as a result of migration, the remaining population increased their consumption. This is possible because of the effects of remittances and increased earnings due to migration, especially if these remittances go to low income groups with a high marginal propensity to consume.

The reduction in consumption, if it occurs, could constitute a net gain to the sending country to the extent that the departure of the active population would not cause a decline in production of greater or equal magnitude. It is sometimes claimed (Kindleberger, 1965) that the reductions in consumption and output due to migration usually cancel each other. However, it is quite possible that the reduction in consumption could be smaller than that in output. In order for migration not to reduce aggregate production in the sending country, it should absorb either the unemployed or those whose position could easily be filled by other unemployed members of the labour force with the same qualifications and quality. With the already existing shortages of skilled labour in many developing countries, it is hard to believe that it is possible or easy to substitute unemployed workers for the skilled who migrate. It is equally difficult to substitute capital for labour because of the already existing bottlenecks of capital. Thus the matter would depend partly on the type of labour migrating.

6.3.4: Gained training and experience versus the outflow of human capital.

It is often argued that countries of emigration could derive substantial benefits from the training of their migrants in modern methods of production and from behavioral conditioning to the industrial environment. The realization of such benefits however depends on many things. Firstly, if migration is permanent or if migrants return home at the retirement age, the home country will not benefit from their gained training and experience. Secondly, this would depend on how suitable the gained training and experience are to the home country. If migrants take low skilled jobs abroad they might not be adequately trained, or if they receive highly specialized training in accordance with the needs of the immigration country, these might be of limited use in their home country. Thirdly, the productive use of this gained training is also important i.e. whether returning migrants are willing to enrich the labour force rather than returning to occupations which are of minor significance to the economic development of the country. These benefits of gained training and experience might or might not be realized when migration is to the industrialized developed countries. However, the existing evidence does not seem to support significant gains, but rather it suggests that if the migrant was unskilled when he left his country in the first place, he is unlikely to return home with any useful skills (e.g. Cerase 1967, Paine 1974, etc.). More doubts arise when migration occurs

from a developing country, like the Sudan, to other developing countries, like the AOPEC. This is because the industrial sector itself in these countries might not be developed to train migrants, rather it might depend on experienced migrants to establish their industrial base.

These gains in training and experience by migrants abroad, are often compared with capital losses associated with the migration of skilled labour and professionals. The direct and opportunity costs of educating and training personnel in the home country might be very high compared to the gained training and experience from migration. The literature, especially on the brain drain, goes far to claim that in many cases emigration countries are subsidizing immigration countries by providing trained manpower (e.g. Kade & Schiller, 1972). These opportunity costs of training, educating and losing this labour through migration could be very high for a developing country with limited resources and shortages of skilled manpower. In many cases for social and political reasons, the costs of education and training might not be avoidable, even if it is known that such potential labour would migrate. It is worth mentioning that, if migrants are mainly unskilled labour, then losses to the emigration countries due to such costs of education and training might not occur.

6.3.5: Demographic effects

The demographic consequences of migration on the sending country's population and its labour force, include the actual

and potential impact of migration on the size, structure, and growth rate of the population. Zolotas (1966) points out that the demographic problems usually associated with overpopulation pressures could also take the opposite form of underpopulation and dependent societies. Because migrants tend to concentrate in the active age groups, the age structure of the population may deteriorate. Thus, if migration continues on a large scale, the sending country's population may be composed mainly of old people and children. If migration is temporary, this situation might not arise. However, as a result of migration, the size of the economically active population would obviously fall. This decline, of course, may be offset if non-migrants who were inactive became active now.

Migration may also affect the population growth rate. This might fall if migrants postpone their marriage, or if husbands and wives are separated for long periods because of migration. The rate of urbanization may also be affected as a result of migration. This might fall if people who would have migrated to the urban areas, migrate abroad now. It may rise if people migrate to urban areas as a first step towards migrating abroad, or if returning migrants tend to settle in urban areas rather than in the rural areas.

In summary, this section has dealt with some implications of labour migration abroad for the home country's economy, spelling out the theoretical justification for their consideration

It should be pointed out that there are other implications of migration to the economy of a country. Among these is the impact of migration on the public sector accounts, like tax revenue, public expenditure, etc. The government could lose the tax revenue paid by migrants before migration. Expenditure on organizing migration would increase, e.g. personnel needed to handle passports, etc., although this might be offset by a rise in the fees paid by the migrants.

6.4: The impact on the individual

The discussion in the above section dealt with the effects of migration on some macro-economic variables. These are obviously important indicators for the assessment of migration's impact on a country's economy from the social point of view. These however do not account for the welfare implications for the individual, since these could be different from those of the society. In this section we present some discussion of the implications of migration for the individual. A central problem here concerns whose welfare should be taken into consideration, that of the migrant or non-migrant, and whether the welfare of the migrants should be considered part of the welfare of the emigration or the immigration country's population. If migration is permanent so that migrants leave the home country once and for all, then it might be possible to consider what happens to the welfare of those left behind in the emigration country. This, however, might not be the case if migration is temporary. Thus, studies dealing with

the welfare implications of migration have generally considered separately the welfare of migrants, non-migrants in the origin country and non-migrants in the host country (e.g. Berry & Soligo 1969, Bhagwati & Rodriguez 1975, etc.).

Whether migrants themselves will be financially better off or worse off would depend on whether what they earn abroad exceeds the costs of migration and their foregone income at home. Added to this are all the psychic costs and benefits associated with migration. These would include separation from the family, familiar surroundings, breaking old friendships, loneliness, etc., as compared to the advantages of gaining new experiences, of knowing a new society, the status of being abroad, etc. These non-quantifiable aspects of migration are as important to any individual migrant as the financial aspects, if not more so, and in any attempt to assess the effects of migration from the individual's point of view they should be taken into consideration.

International migration not only affects the incomes of migrants and their families, but also the incomes of non-migrants at home. It has been argued that, for infinitesimal movements, migration will neither make non-migrants better off nor worse off (Grubel & Scott, 1966). This is true if the migrant has been contributing his marginal product to the national income and earning it as well, thus his presence or absence is irrelevant to the non-migrant welfare. However, if there are finite movements, welfare losses do occur to the remaining population (Barry & Soligo, 1969). It was also

argued that migration would improve the per capita income of the remaining population at home. This stems from the assumption that, although the migrant was adding his marginal product to the national income, he was earning his average product i.e. higher than his contribution. However, an improvement in per capita income for example, might not be accompanied by an improvement in income distribution, and might make at least some non-migrants worse off. This raises the problem of how migration affects the distribution of income in the home country. A priori it is difficult to state clearly whether migration improves or worsens income distribution, since the problem involves many factors. In the first place this depends on the origin of migrants, and who migrates, whether the poorest or those with above average income. However, the impact of migration on income distribution is far more complicated than this. For example, migration may affect the income of others if more employment is created by returning migrants, or from investment of remittances, or if labour shortages as a result of migration lead to a wage rise. Migration, moreover, could affect income distribution between different economic sectors e.g. agriculture and industry by affecting their terms of trade. It could also affect factor payments, for example, the rise in wages due to migration may be paid out of profits. Furthermore, migration might affect income distribution between regions of the country, depending on the region from which migration is occurring, and to which migrants are returning.

6.5: Summary and conclusions

In this chapter the possible consequences of migration for the sending country's economy were spelt out and discussed in detail. The discussion has centred around the effects of migration on certain macro-economic variables, as well as the implications for the individual migrant and non-migrant. Whether migration is beneficial or not for the economy of the sending country would depend on the outcome of many factors. It would depend on the nature of migration itself, whether permanent or temporary, on the skill composition of migrants and their employment status before migration, and thus the resulting reductions in domestic unemployment and output. This would also depend on the size of remittances from abroad, their contribution to foreign exchange earnings, and the use they are put to at home, and the implications of all these to the balance of payments. It will depend also on the gains in training and experience by migrants while abroad, and the effective use of these at home, as well as losses in human capital as a result of migration. The net effects of migration would also depend on the effects on imports, exports, exchange rate as well as income distribution and other factors. Certainly not all these possible effects of migration lend themselves to precise measurement for the sake of empirical investigation. Even when measurements are proposed, a major constraint could be the availability of data. In the next two chapters, attempts are made to measure some of these effects of international migration on the Sudanese economy.

CHAPTER SEVEN

IMPLICATIONS FOR THE SUDANESE ECONOMY

7.1: Introduction

In the previous chapter, the possible gains and losses to the emigration country due to migration were outlined and discussed in detail. In this chapter, attempts are made to quantify and analyse the implications of Sudanese migration abroad for the economy of The Sudan at large, as well as for the individual migrant and non-migrant. Taking the economy at large, certain macro-economic variables are considered in this chapter. These include the effects of migration on the population and labour force, on the domestic unemployment levels, on the balance of payments, and on other topics. These are each discussed in a separate section. To complete the assessment, implications of migration for the individual migrant, his family, and the non-migrant left at home are also discussed in a separate section. The net impact of migration and whether it might be beneficial or harmful to the economy is then outlined in the summary and conclusions of the chapter.

7.2: Effects on the population and labour force

According to our estimates, the total number of migrants abroad by 1978/79 of 78,750 migrants (Section 2.6) would only account for about 0.5% of the estimated 1978 population of The Sudan, a very small proportion.(1) However, migrants are mainly from the working ages, and in such a case, a proper comparison would be with the economically active population. The total number of migrants amounts to only 1.5% of the 1978

economically active population, again a very small proportion.

What is important, however, is not only the total number of migrants, but also the age and skill composition and other characteristics of migrants compared to the labour force in the country. As discussed in Chapter Five, migrants are basically young educated males. Table 7.1 below gives a comparison of migrant's age and the economically active population of The Sudan.

Table 7.1: Percentage distribution of migrants and the economically active population by age groups.

Age group	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
Migrants	1.0	16.5	36.1	25.2	11.0	7.0	2.6	0.6
Pop.	11.2	12.0	15.8	12.0	13.7	9.6	7.8	17.8

Notes: Pop. is the economically active population of The Sudan.

Source: (1) Migrants, according to the 'migrants survey'.

(2) Population from "1973 population census, the provisional results". Dept. of Statistics, Khartoum, 1976.

The table clearly shows that the percentage of migrants in the active age groups is higher than that of the economically active population. While over 95% of migrants are in the 20-44 age groups, only 63% of the economically active population are in this age group. In general, the percentage of migrants in the active ages of 20-34 years, exceeds that of the population by large margins. It is only at ages above 35 or below 20 years that the percentage of the economically active

population is higher than that of migrants.

When it comes to educational attainment of migrants, it seems that these are very high compared to the indigenous population of the country. While the literacy rate among the population aged ten years and more is about 31% (44% for males) according to the 1973 population census, it amounts to 90% among migrants (Table 5.1). The skill composition of migrants also suggests that considerable proportions of the highly skilled labour force have migrated abroad. Migration, thus, seems to deprive the country of its most active, skilled and educated manpower. It seems that, if migration continues at the same rate and composition, the country might be faced with shortages of labour, especially skilled labour.

7.3: Reductions in unemployment

The general level of open unemployment in the country, as discussed in Section 3.3.3 is quite low, although unemployment is particularly high in urban areas and among young school leavers. The statistics of registration and appointment from the employment offices, however, suggests a clear mismatching between entrants to the labour market and the number of job vacancies. Although these figures from the employment offices are in doubt, as discussed in Chapter Three, on the face of it they indicate persistent unemployment, and raise the question of why unemployment does not seem to fall despite migration. It should be pointed out that to explain persistent unemployment data is needed, among many other things, on new

entrants to the labour market, retirement and death rates, job creation process, etc. However, it is legitimate to ask what the level of unemployment would be had migration not occurred. The estimated total number of migrants abroad amount to 8.0% of the estimated 989,616 persons added to the labour force from the education system between 1969/70 and 1978/79 (Table A9). If all migrants were unemployed before migration, then their departure would result in direct reduction in the unemployment rate. If they were already employed, their departure would reduce unemployment only indirectly. Naturally not all migrants were unemployed before migration. The unemployed before migration amount to 11% of the sample. Most of these unemployed were general and secondary school leavers, which suggests that the country is able to export some of its unemployed labour force.

7.4: Implications for the balance of payments

One of the most tangible effects of migration on the home country's balance of payments and foreign exchange earnings, is migrant's remittances from abroad. Chapter Eight discusses the role of remittances in greater detail. For the purpose of this section only a brief discussion is presented. Remittances through the official banking system have increased considerably, especially after the mid 1970s. They contribute considerably to the reduction in the foreign exchange gap, and they account for a high proportion of imports and exports of the country. Remittances, however, not only contribute to foreign exchange earnings, but also

migrants' families at home enjoy higher income as a result of remittances. Whether these remittances contribute to domestic savings and capital formation depends largely on the use they are put to at home. The evidence suggests that remittances are largely spent on consumption rather than in productive use. However, although remittances could be looked upon as a means of providing foreign exchange for the country, and a source of income for families at home, yet they have some disadvantages to the country. In fact the unpredictable nature of the flow of remittances is only one disadvantage associated with their utilization as a source of income and foreign exchange earnings. In general, the evidence suggests that, the short-term advantages of the money transfers by migrants to the country are clear. The task of the government is facilitated externally by the foreign exchange they provide, and internally by the income they distribute. But in the long run, they might give a false impression of ease, and thus discourage the tackling of basic problems, since in the long run, migration involves changes in work and consumption habits as well as in exports, imports and the price level in the country.

7.5: Effects on consumption

It is always contended that emigration countries benefit from the reduced consumption resulting from the departure of migrants and their families. In this section we attempt to assess the implications of migration from The Sudan in this respect. For the Sudan, there is no way to measure directly

the reduced consumption due to migration, and even if a proxy is suggested, the lack of data still presents a major problem. There is no doubt that the departure of migrants and their families would reduce consumption by the amount they used to consume. In practice, however, most migrants leave their children and dependents at home. Table 7.2 below shows the average numbers of dependents and children for different categories of migrants.

Table 7.2: Average number of children and dependents for different categories of migrants.

Category	Average No. of children	Average No. of dependents
All migrants	1.2	5.0
Unmarried migrants	0.0	3.9
Married migrants	2.6	6.2
Married unaccompanied by family	2.9	6.8
Married accompanied by family	2.2	5.0

Source: Migrants survey.

The table indicates that married migrants unaccompanied by families have larger numbers of children and dependents than the accompanied migrants. This is natural since taking the family abroad would increase expenditure abroad. Also, immigration countries do not encourage migrants to bring their families with them. Saudi Arabia, for example - except for certain categories of migrants like teachers, doctors, engineers, etc. - insists that a migrant's earnings should be

at least SR 4000 per month with a stay of one year in the country before he can bring his family to Saudi Arabia(2). Such regulations imply that most migrants must leave their children and dependents at home. Unmarried migrants also have dependents at home. In fact less than 19% of the sample stated that they had no dependents left at home. Thus, although consumption at home might be reduced as a result of migrants' departure, reductions due to the departure of families and dependents might not be very great. Moreover, consumption at home may increase rather than decrease, due to the increased purchasing power of families at home as a result of remittances from abroad.

7.6: Output losses

The loss of skills that are difficult to replace may cause considerable damage to the domestic economy, since it may result in slowing down production and reducing productivity. In countries with an abundant supply of labour, this unfavourable consequence of migration might not be that serious. But given the supply bottlenecks of skilled and high level manpower in many developing countries, reduction or slow down in production might be inevitable.

Assuming no replacement of migrants, and that wages reflect fairly accurately the marginal productivity of the worker, we could equate the value of the loss in output due to migration, to the earnings that migrants would have received had they stayed at home. However, the assumption of no replacement for any of the migrating workers is hardly

acceptable. Moreover some of the migrants were unemployed before migration and their departure could hardly contribute to losses in output. Furthermore, it is unwise to assume the same wage, and thus the same marginal productivity for all types of migrants. This would differ according to the skill level of migrants. And finally migrants might return home after some time abroad, and thus their departure might not be a complete loss to the economy. Unfortunately the data is not available in the details of enabling precise conclusions to be drawn in this respect.

It is interesting to investigate the implications of migration for the output of different sectors in the economy. However, because migration is very recent, it would not be clear yet whether migration had actually resulted in significant output losses in any sector. Because most of the economically active population is involved in agriculture, with a high possibility of underemployment, and because the majority of migrants are basically from the urban areas, it is unlikely that migration could have resulted in significant output losses in this sector. Fluctuations in agricultural output have been attributed to weather conditions and the government's agricultural policy(3). Migration may even result in output increases in this sector if migrants invest their savings in agriculture. Although most savings and remittances from abroad are spent on consumption (Chapter 8), yet about 13% of migrants intend to invest part of their savings in agriculture. The situation in the industrial sector is not

very clear either. However, the existing under-capacity utilization in the public sector industry in the country has been attributed to non-labour factors, such as inefficient machinery, shortages of raw materials, etc.[4] The most likely sector to have lost labour to migration is the services sector (Table 5.3). However, as discussed in Chapter Three, this sector seems to be overstaffed largely because of the government policy to employ all educated manpower irrespective of the actual demand for them. With such under-employment the removal of some labour might not result in significant output losses. However, taking the present high rate of migration, it is likely that labour shortages to the extent of creating significant output losses would occur in the long run, if migration continues at the same rate and composition.

7.7: Gains in skills due to migration

It is hypothesised that emigration countries gain from the acquisition of new skills by migrants while abroad. This section attempts to examine such a hypothesis. It was noted in Chapter Five that migrants abroad work in different sectors of employment and occupation from those at home. In many cases occupations abroad are down-graded, and migrants often take unskilled and low rated occupations (Sections 5.5 and 5.6). Such observations suggest that, while abroad, migrants tend to take jobs which are not suitable to their previous experience and qualifications, and that they gain little skills from migrating abroad. In answer to the question whether migrants

think that their present occupations correspond to their previous experience and qualifications or not, the results were as set out in Table 7.3 below.

Table 7.3: Present job in relation to experience and qualifications

Suitability	No.	%
Very suitable	86	28
Suitable to some extent	115	37
Not suitable at all	84	27
No job	17	5
Did not state	8	3
Total sample	310	100

Source: Migrants Survey.

The table suggests that those who think their jobs are not suitable at all are nearly equal to those who think that their jobs are very suitable. If one adds to the former, those who think their jobs are suitable to some extent, these would certainly make the majority of migrants in the sample. The percentage of those stating their present job as being very suitable to their experience and qualifications are higher among those with higher levels of education and those with high rated occupations (Table B19). This situation of job suitability, coupled with the down-grading of occupations abroad, as well as changes in profession - e.g. sometimes an electrical engineer, say, would be working as a civil engineer, mechanical engineer, etc. - would mean that migrants do not

gain considerable new skills and training from migration. Generally speaking then, the evidence does not seem to support the notion that migrants learn new skills from migrating abroad, since the majority of them work on jobs which are inconsistent with their qualifications and previous experience. This, however, does not deny that migrants could learn new experiences in knowing a new nation, and new dimensions to life which might broaden their horizon and way of thinking, and stand as a positive aspect of migration.

7.8: Losses in human capital

Gains in new skills from migration are often matched with capital losses associated with the migration of the skilled and professional workers i.e. the direct and indirect costs of educating, training and losing the worker through migration, as well as the cost of replacing the migrant worker. The direct private cost of educating a pupil was estimated by the ILO in 1973 to be about £S 30 for the primary level of education increasing to about £S 301 for a university graduate. The public sector cost was estimated to be about £S 180 and £S 6405 respectively(5). These costs might have increased considerably since 1973. They show the high public sector costs of education relative to the private costs, reflecting the fact that education is almost provided free by the state. With the literacy rate amounting to 90% among migrants (Table 5.1), and a considerable proportion of migrants with high levels of education, it means that substantial capital

is lost to the state through migration of educated manpower. The educational capital embodied in the worker, are only part of the total stock of human capital exported through migration. Knowledge and experience gained through work are equally important. Considering the fact that the majority of migrants have been working in The Sudan before migration, with average duration of employment of about three years; this component of human capital could also be substantial. Moreover, resources devoted to education and training have an opportunity cost that must be taken into consideration. These costs might be very high in a country with scarce capital. However, it should be noted that investment in education is made for multiple reasons, and that they would have been made regardless of whether people migrate or not. Furthermore, it is also important to make the distinction between permanent and temporary migration. In the case of the latter, the migration of workers might not be a complete loss. It could also be argued that migrants pay their costs of education through the cash remittances they send from abroad, and thus the net impact could be treated as the trade-off between these costs and the cash remittances they make. Remittances, although they might contribute to the improvement of the balance of payments, are essentially private transfers, and it is the migrant and his family who are the main beneficiaries. In contrast, education and training costs are mainly borne by the state or the society. Thus, in general, although it is very difficult to put a magnitude on the losses in human capital embodied in migrants, this could be higher, especially

for the highly educated migrants.

7.9: Impact on the individual

As discussed in Chapter Six, the implications of migration for the individual could be different from those for the society in general. While the discussion in this chapter so far has dealt with the impact of migration on the economy and society at large, it did not deal with the impact on the individual migrant himself, his family, or the individual non-migrant. The purpose of this section is to reflect some of these impacts.

There is no doubt that migration has benefits and costs to the individual migrant himself. As a result of migration, migrants earn higher incomes than their earnings before migration. For example, while the monthly minimum earnings before migration reported by migrants in the sample was £S 7, these are SR 800 a month abroad, or about £S 120.66 at the official exchange rate(6). On average, a migrant used to earn £S 59 a month before migration, while abroad he earns an average monthly salary of SR 2572 (Table B9) i.e. about £S 387.93 at the official rate of exchange or about £S 621.26 at the premium rate offered to migrants(7). In other words migrants' salaries abroad are nearly seven times greater than average earnings before migration using the official exchange rate, and more than ten times greater if the premium rate is used. It is important to note that this comparison uses the migrants' average salary. When the value of allowances given to some migrants is added to this, the difference in

earnings is much higher. Thus total average earnings abroad are nearly thirteen and eight times greater than those at home, at the premium and official exchange rates respectively. However, it should be pointed out that the comparison is more complicated than this, since it should involve not only the exchange rate, but also prices in the two countries, the time of comparison and other factors. For example, average earnings before migration would usually spread over a span of time, since not all migrants migrated in the year of the survey. Thus, average earnings before migration was re-calculated using yearly averages and adjusted by the consumer price index(8). To obtain real earnings in both countries, average earnings were adjusted to the 1975 consumer price index. Using this, average earnings before migration amounted to £S 50.75, while those abroad amounted to about £S 410.15 and £S 256.11 at the premium and the official exchange rates respectively. That is, salaries abroad are more than eight and five times higher than those before migration at the two rates. When allowances are added total earnings abroad are nearly ten times and eight times higher than those before migration at the two rates of exchange. This suggests that migrants' real earnings are slightly reduced while abroad. Nevertheless, real earnings abroad are still higher than those at home.

However, in counting benefits for the migrant, one should not ignore the costs incurred by him. There are tangible and non-tangible costs of migration which might be important to the individual migrant. For those who were

already employed before migration, earnings they forego from previous employment would reflect the opportunity cost of foreign employment to a large degree. These, however, would be reduced largely if a migrant had a work contract according to which he could take up employment abroad directly on arrival rather than spending some time searching for a job. Among migrants in the sample, the time spent in first job search is not very long (Section 5.8) and the income foregone is minimal. Added to this cost are the travel and other tangible costs of migration. When a worker migrates with a work contract, these travel costs are usually paid by the employer abroad. However, given the fact that in practice some migrants obtain only a work visa, and in some cases they have to pay for this work visa illegally (Section 2.5), it seems that some costs to the migrant are inevitable. Among the other tangible costs are those incurred in quitting a job at home. For example retirement benefits and other benefits may have to be sacrificed if one decides to migrate. Other less tangible costs include the risk that one might not find a job readily available on returning home, especially if the migrant was not able to make savings abroad on which he could rely after returning home. However, most of these costs, like many intangible benefits may not be measurable. Nevertheless, given the large monetary gains to the migrant in the form of higher earnings abroad, it seems that on balance, the migrant is better off than before migration.

It is not only the individual migrant who benefits financially from migration, but also his family at home. As a result of migration, migrants are able to remit home larger amounts of money than they would have earned at home for themselves and their families, thus increasing the incomes of families left at home. Average remittances in cash per month amounted to about SR 496 (Table B13). This would mean average remittances in cash of about £S 74.81 at the official exchange rate i.e. about 1.3 times average earnings before migration. This also makes about £S 119.81 at the incentive rate offered to migrants or more than twice average earnings at home. To these cash remittances one should also add remittances sent home in the form of goods, i.e. remittances in kind. Average remittances in kind per month amounted to SR 117 or about £S 28.3 a month at the premium rate and about £S 17.6 at the official exchange rate. To both these one should also add any presents the migrant would bring to the family and friends on visits home. Thus as a result of migration and remittances from abroad, the standard of living, at least for migrants' families at home, increased considerably. One of the top priorities for remitted earnings is an improved standard of living for the migrant's family. Nearly 25% of the migrants in the sample reported that they intended to spend their savings to improve family conditions at home (Chapter 8), while 37% of them intended to buy or build a house for the family. Moreover, of those who reported owning a house in The Sudan, about 61% acquired it after migrating abroad. The remaining 39%,

although they owned a house before migration, spent some of their savings and earnings abroad on improving it. Thus, as a result of remittances from abroad, people are now better clothed, housed and fed. The rise in the standard of living and the ways in which remittances are spent would not only affect migrants and their families, but also other non-migrants, because of the spill-over effects of these remittances. In fact the general rise in the standard of living could be seen in many remote villages which had never dreamed about electricity in the past, now having small electricity generators brought by migrants to provide electricity not only for their own family but for the whole village. This is in addition to other consumer goods, such as T.V. sets, radio and tape recorders, etc., which were rarely available in the villages. However, it should be pointed out that such consumption, although it might raise the standard of living, might also put more constraints on the balance of payments of the country, if the society at large demanded more imported goods. As far as the impact of migration on the migrant and his family is concerned, it seems that, both are financially better off than before migration. However, this does not mean that all migrants are successful. There is no doubt that some of those who migrate do not find jobs or are unable to make any savings. For example, nearly 7% of migrants in the sample stated that they were not able to make any savings. Added to these are the 5% who are unemployed. Most of these, however, are new migrants who naturally would take some time to settle, find jobs and make savings.

For the individual non-migrant, the costs and benefits of migration could be completely different from those for the migrant and his family. The full implications of migration for the society at large, apart from the implications discussed in the above sections of this chapter, would include the implications of migration for income distribution. Whether migration improves income distribution or not would depend on many factors, among which are comparative earnings, size of remittances from abroad and their use at home, as well as the origins of migrants. Earnings and remittances from abroad were already discussed, and migrants and their families seem to derive substantial monetary gains from migration. As for the migrant's origins, if they originate in families with above average income, then migration would tend to worsen income distribution. Although no precise information about this is available, generally speaking it seems that it is those with higher incomes, e.g. the skilled and educated, who migrate. If earnings in The Sudan are determined by level of education and occupation - the most important factors - the fact that those with higher educational and occupational attainments form a considerable proportion of migrants in the sample implies that most migrants were from the better-off income groups at home. Such an implication would suggest that migration tends to increase income inequality. Furthermore, even for those who had the same income, the fact that the migrant could earn abroad more than the non-migrant, making more savings and sending remittances home, would imply that the migrant is much better off. This

possibility might induce more migration from the country. However, income distribution is also affected by the way in which remittances from abroad are spent at home. These are discussed in the next chapter in greater detail. If these remittances are spent on industrial goods, for example, they would increase the incomes of those working in industry, etc.

Equally important, if not more so, are also the implications of migration for income distribution between regions of the country. If migration occurs mainly from a certain region, then labour shortages in that region might adversely affect output. However, remittances to this region might contribute to its development if they are productively used. Migration could, furthermore, affect income distribution between the rural and urban areas. If remittances are spent more in one area than another, income disparities might increase. Although migrants from The Sudan were originally born in rural areas, most of them intend to settle in urban areas on returning from abroad (Section 5.10). It is not only settlement, but also the intended use of savings suggests that most savings and remittances would be spent in urban areas (Chapter 8). Thus, while it appears that migration offers considerable positive benefits to the migrant and his family, doubts arise as to whether non-migrants are served well by the process of migration. The choice between the individual migrant and the society, however, is essentially a choice between the private and social cost and benefits which in many cases is determined by the planner or by the state.

7.10: The net impact of migration

This chapter has dealt with the impact of migration on the Sudanese economy at large, the individual migrant, his family and non-migrants. These impacts involve factors which are quantifiable and others which are not. However, it was not always possible to quantify factors which are measurable in practice because of data imperfections and scarcity. In such circumstances it is very difficult to conclude with greater precision whether migration has been beneficial or harmful to the economy. Nevertheless, the analysis in the chapter gave some general insight in this respect. This section summarises the main findings of the chapter. However, most of the evidence should be taken as indicative rather than conclusive due to the data problems.

The investigation in the chapter has shown that it is not only unskilled labour that migrates abroad, but largely skilled and educated manpower. In this way it seems that migration could result in an overall decrease in the labour force, especially of the educated and skilled. This reduction could develop into acute shortages sufficient to hinder the economic development of the country, if migration continues at the same rate and composition. At present, manpower shortages do not seem to be significant, and thus output losses would be minimal. This, however, does not rule out some imbalance in the labour market in the sense that shortages of certain skills and professions could exist beside surpluses in others. The obvious strategy for the government, then, is

to monitor each category and regulate migration and training accordingly. On the other hand, migration seems to have worked as a safety valve for relieving domestic unemployment and underemployment pressures. The domestic economy has persistently failed to respond effectively to the new entrants to the labour market. In a sense, then, migration has served as a factor for reducing unemployment and defusing the social tension which could otherwise have affected the existing economic, political and social structure. However, because migration involves small numbers, and most of the migrants were already employed before migration, it seems that the unemployment problem might not be solved completely through migration. Because of the existence of unemployment and underemployment and the short period since migration has occurred in significant numbers, it does not seem that migration has resulted in any significant decrease in output, especially in the agricultural sector. The sector which is more prone to output losses is the services sector, although the considerable underemployment in this sector might prevent output declines in the short run. Gains in training and new skills by migrants while abroad do not seem to be substantial. The evidence suggests that very few migrants gain new skills from migrating abroad. Migrants generally take employment which is lower than their previous occupations, and which is inconsistent with their past experience and qualifications.

For the individual migrant and his family at home, it seems that both can derive substantial monetary gains from migration. As a result of migration, migrants are able to earn, and remit home, quantities of money which exceed what they used to earn at home before migration. In this way they are able to improve the standard of living of their families at home, as well as other parts of the population. However, this does not mean that all migrants are successful, nor that migrants do not incur any cost in deriving these gains. These costs, however, are largely non-monetary and it is highly possible that they are outweighed by the monetary gains.

Notes to Chapter Seven

(1) The 1978 population of The Sudan is estimated to be about 17,376,000 according to UN "Demographic Yearbook" 1980, and the economically active population is estimated to be 5,212,800, according to the ILO "Yearbook of Labour Statistics" 1979.

(2) ILO "Social and Labour Bulletin" No.4, Dec. 1980, p.482.

(3) Ministry of Finance and National Economy "Economic Survey 1979/80" (Arabic) P.21, Khartoum. Also, IMF Survey (1980), and Nashashibi, K. (1980).

(4) According to the Bank of Sudan "Annual Report" 1978, P.14, underutilization of capacity is mainly due to "obsolete and inefficient machinery, shortages of raw material, failure in electric power, transportation bottlenecks and marketing problems".

(5) ILO (1976). "Growth, employment and equity ...".

(6) Strictly speaking, comparability could be misleading, because not all migrants have entered Saudi Arabia in 1980, the time of the survey. If exchange rate was fixed, prices and earnings might change over time. However, given the observation that more than 50% of migrants in the sample have migrated between the time of the survey and the two preceding years, this short time might justify the comparison. See also note (8) below.

(7) At the time of the survey, April/May 1980, the official exchange rate in The Sudan was US$ 1 = £S 0.50, i.e. £S 1 = SR 6.63 (US$ 1 = SR 3.315 in April/May 1980 according to the IMF 'International Financial Statistics'). Migrants were offered an incentive rate of US$ 1 = £S 0.80, i.e. £S 1 = SR 4.14 by the banks in The Sudan.

(8) Average earnings in The Sudan were calculated as follows: $\bar{W} = \bar{w}_1/p_1 + \bar{w}_2/p_2 + \ldots\ldots + \bar{w}_t/p_t$, where $\bar{W}$ is average earnings per migrant, $\bar{w}_i$ is average earnings in year i, p_i is consumer price index in year i at 1975 prices, and t is time.

CHAPTER EIGHT

THE ROLE OF REMITTANCES FROM ABROAD

8.1: Introduction

In this chapter we attempt to provide empirical answers to some questions about the role of remittances from abroad. These include the size, frequency, determinants, and the use these remittances are put to at home, as well as other related topics. Section 2 attempts to answer the question of who remits i.e. do migrants' characteristics affect their decision to send remittances home. In Section 3 the size of remittances is investigated, while in Section 4 attempts are made to examine the determinants of these remittances. In Section 5 the frequency of remittances is explained. The channels through which remittances are sent home are discussed in Section 6, while the main uses of remittances at home are investigated in Section 7. The policies introduced by the government to attract these remittances are discussed and critically evaluated in Section 8. Finally in Section 9, the summary and conclusions of the main findings are presented.

8.2: The socio-economic background of migrants and the decision to remit.

It might be interesting to start the analysis in this chapter by the question of who remits? or in other words, do the demographic, social and economic characteristics of migrants affect their decision to remit. Columns (1) and (2) of Table B13 in Appendix B, show the percentage of migrants who remit in cash and in kind. While 88% of migrants in the sample remit in cash, only about 55% remit in kind.

This, apart from showing that a considerable proportion of migrants remit in cash and in kind, suggests that migrants tend to remit in cash rather than in kind. These proportions, however, vary according to migrants' socio-economic background. For example, as their age increases, the proportion of migrants who remit in cash increases until it reaches 100% of the eldest group. This is natural since older people are likely to be married and have more dependents than younger ones. Thus, it is notable that a higher proportion of married than unmarried migrants send remittances home. Moreover, the proportion of migrants accompanied by families abroad who remit is slightly lower than for those unaccompanied. The presence of the family abroad would increase expenditure abroad, while the need of the family for maintenance at home would induce unaccompanied migrants to send remittances home. Other characteristics also have some effect on the decision to remit. For example the proportion of those with higher occupational and educational levels who send remittances home is lower than those with lower levels. This, however, does not necessarily mean that migrants with higher levels of education and occupation do not remit home. These groups are more able to take their families abroad because of their relatively higher incomes and other facilities offered to them.

8.3: The size of remittances

Total remittances in cash through the official banks have increased considerably over the decade. Table 8.1 overleaf shows these remittances.

Table 8.1: Remittances in cash (in £S million) and as percentage of some economic indicators (1970-79).

Year	Remittances (£S M)	As % of invisible receipts	As % of invisible payments	As % of exports	As % of imports	As % of GDP
1970	0.4	2.7	1.5	0.4	0.4	0.1
1971	0.4	2.5	1.5	0.4	0.4	0.1
1972	1.1	6.6	3.4	0.9	0.9	0.1
1973	1.2	7.3	3.2	0.8	0.8	0.1
1974	1.5	6.6	2.8	1.2	0.6	0.1
1975	2.2	6.3	3.5	1.4	0.6	0.1
1976	4.3	10.2	5.6	2.2	1.3	0.2
1977	15.0	26.6	19.7	6.5	4.0	0.6
1978	36.1	29.4	39.2	17.9	8.0	1.1
1979	75.4	45.1	57.1	32.4	15.8	2.4

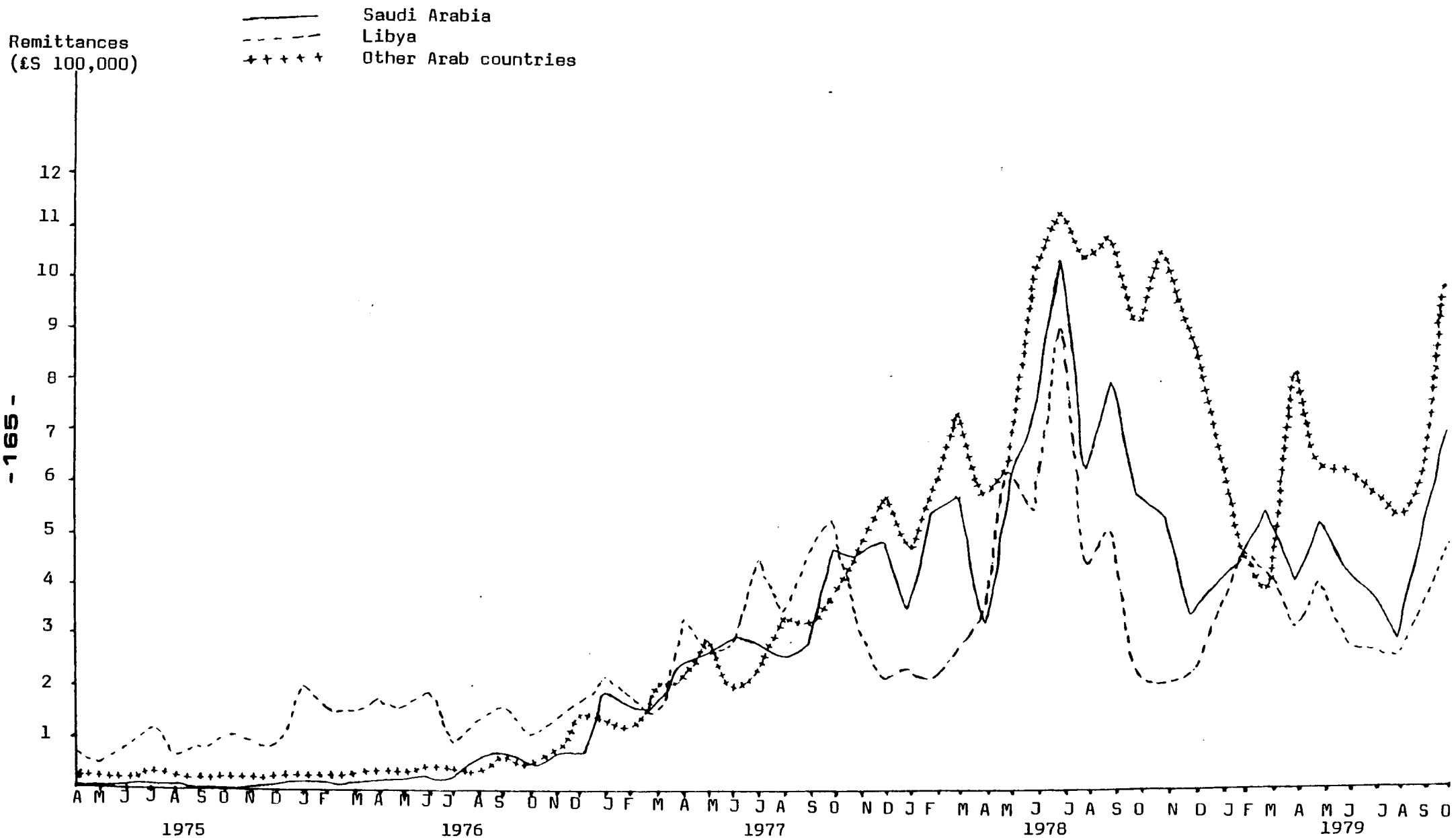
Notes: Remittances are cash remittances through the banks.

Source: Compiled from Bank of Sudan "Annual Reports" and "The Economic Survey" of the Ministry of Finance and National Economy, Khartoum (different years).

The table clearly indicates the sharp rise in cash remittances, especially after the second half of the 1970s. This rise in remittances could be attributed partly to the increase in the number of migrants after the mid 1970s (Chapter Two). Among other factors which might have contributed to this rise are the policies introduced by the government to attract remittances, as well as the devaluation of the Sudanese pound in June 1978 and September 1979[1]. The table, furthermore, shows that remittances have also been increasing as a percentage of all variables in the table. Remittances are, thus, large enough to be given their weight in any policy concerning migration, and foreign exchange earnings. In this way, one could say that migration could contribute considerably to foreign exchange earnings, and so remittances from abroad do contribute to the reduction in the foreign exchange gap.

Figure 8.1 overleaf shows monthly officially recorded remittances through the banks by source country for the period April 1975 to October 1979 (data in Table A11). The graph shows remittances from Saudi Arabia, Libya, and other Arab countries. Other Arab countries are Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Syria, UAE and YAR. These are pooled together because of the small remittances from each one separately. The figure generally shows the same pattern of fluctuations for all the countries shown in the figure. As in Table 8.1 above, Figure 8.1 shows considerable increase in remittances especially after 1977. The peak of remittances occurred in July 1978, after the devaluation of

Figure 8.1: Monthly remittances through the banks by source country Apr. 1975 - Oct. 1979.



the Sudanese pound in June 1978. The fall in remittances after July 1978 might be explained, partly, by the fact that despite the devaluation of the pound, the incentive exchange rate offered to migrants by the banks was not changed (Section 8.8.4 below) until March 1979. Despite this, however, and the devaluation of the pound again in September 1979, remittances never reached the July 1978 level. Thus, although the determinants of remittances could be many, remittances do not seem to be very sensitive to exchange rate fluctuations.

The figure, furthermore, shows that as a single source of remittances, Libya was dominant, until the end of 1977, after which Saudi Arabia was dominant, although they both moved closely together. Remittances from the group of other countries has always been higher than from Saudi Arabia, and higher than from Libya after the end of 1977. As discussed in Chapter Two, Saudi Arabia is the major recipient of Sudanese migrants, followed by Libya, with the remaining Arab countries receiving only about 10% of migrants. In such a case one would expect more remittances from Saudi Arabia than from Libya and other countries. It would be interesting to ask why this does not seem to happen. Apart from the possibility of different propensity to remit in different countries, there could be many reasons for this. Firstly, we are not sure that the distribution of migrants among these countries remained the same over this period, although it is highly probable that it did not change. Secondly, the data refers to remittances through the banks only. It excludes remittances

through other channels, and in kind. It is possible that migrants in Saudi Arabia remit in kind more than migrants in other countries. This could be more reasonable taking into consideration that, apart from being the nearest to The Sudan, it enjoys cheap sea transport between them. However, as would be noted, migrants in Saudi Arabia remit larger amounts in cash than in kind. In such a case, an explanation might be found in the possibility that migrants in Saudi Arabia use channels of remittances other than the banks more frequently than migrants in other countries. This again is made more possible in Saudi Arabia because of the relative ease of entry to Saudi Arabia, as pilgrim for example, which might facilitate sending remittances with people going to The Sudan. Moreover, this relative ease of entering Saudi Arabia might increase the possibility of illegal migration, which could reduce remittances through the banks, either because illegal migrants cannot use them, or because they are afraid of being caught if they did so.

The discussion, so far, refers to official remittances in cash through the banks. To these one should add savings and earnings which are sometimes repatriated secretly through other channels, as well as remittances in kind. These, however, might not appear directly in the balance of payments accounts, although they might ease the pressure on the balance of payments, apart from being an income source for families at home. Imports financed by these remittances might have put more strain on the balance of payments if they had to be imported by the government instead. It is interesting to ask

whether the size of remittances differ much according to migrants' characteristics. As shown in Table B13, average remittances in cash is about SR 496 a month per migrant, and in kind is about SR 117. Although average remittances seem to differ according to the age of the migrant, the period since out-migration, the marital status, whether he is accompanied by family, and his occupational and educational level, yet these differences are not very high. To test the hypothesis that there is no difference between average remittances of each category, we test the difference between average remittances of any two groups in each category as well as the overall sample average. That is, we test the hypothesis $H_o: \mu_1 - \mu_2 = 0$ i.e. there is no difference in average remittances of migrants, where μ_1 and μ_2 are the true means of groups 1 and 2. This hypothesis is tested using the statistics:

$$t = \frac{(\mu_1 - \mu_2) + (\bar{x}_1 - \bar{x}_2)}{(\sigma_1^2/n_1 + \sigma_2^2/n_2)^{1/2}}$$

where $\bar{x}$, σ^2 and n are the mean, variance and the number of observations respectively, and the subscripts 1 and 2 refer to groups 1 and 2 respectively(2). Applying this test, no statistically significant difference in average cash remittances is found, except for migrants accompanied by their families abroad (Table B13). These tend to remit statistically significant less cash than the overall sample average, as well as less than unaccompanied migrants. This, however, is as expected, since bringing the family abroad might increase expenditure abroad, and thus reduces the capacity of migrants

to remit. Another statistically significant difference occurs for recent migrants (those with less than a year since out-migration). Although there is no statistically significant difference in cash remittances between them and other groups, they tend to send statistically significant less remittances in kind. These probably remit in cash rather than in kind in order to settle the urgent needs of families at home and the debts or costs incurred as a result of migration. Thus, it seems that all migrants with their different socio-economic characteristics tend to remit as much as each other, except those who are accompanied by families abroad who tend to remit less cash than the average migrant. This, however, does not mean that all migrants remit exactly the same amount, but rather it means that no statistically significant difference was found between their average remittances.

8.4: The determinants of remittances

The above analysis, so far, raises the question, what determines the volume of these remittances. In this section, multiple regression analysis is used to shed some light on this area. The suggested regression model is of the form:

$$MR = \alpha_0 + \alpha_1 INC + \alpha_2 ALLOW + \alpha_3 NDEP + \alpha_4 PFAM + \alpha_5 MSTAT + \alpha_6 YENT + \mu \qquad (8.4.1)$$

where

MR = monthly volume of remittances per migrant

INC = monthly income of the migrant

ALLOW = allowances given to the migrant

NDEP = number of dependents

PFAM = whether family is at home or abroad

MSTAT = marital status of the migrant

YENT = period since out-migration from The Sudan.

μ = a random error term assumed to be normally distributed with a zero mean and a constant variance; and

α_i . are parameters to be estimated.

Before presenting the results of the estimation of equation 8.4.1 above, it is appropriate to discuss the relationship between the dependent and the independent variables in the equation, their expected signs and the rationale behind their inclusion in the equation. The capacity of the migrant to remit home would depend, among other things, on the income he earns abroad. The hypothesis is that, the higher this income is, the higher the expected volume of remittances. This indicates a positive relationship between MR and INC. This variable is represented by the monthly salary of the migrant as reported in the migrants' survey. However, it is not only income that matters in this respect, but also the expenditure of the migrant abroad. The higher the expenditure of the migrant abroad, the less able he is to remit. This expenditure, however, might be reduced a great deal if the migrant is given allowances while abroad e.g. in the form of free accommodation, free transport, etc. The reduction in expenditure as a result of these allowances, might increase the capacity of the migrant to remit home. In this way, one would expect migrants who are given allowances, to remit more than those who are not i.e. a positive relationship

is expected between MR and ALLOW. As a proxy for these allowances, we use a dummy variable, equal to unity if the migrant is given any allowances, and zero otherwise. The value of these allowances are not used instead, because of the possible correlation with the income variable. Moreover, if these allowances are not given to the migrant in cash, then their value would only be a guess and not very accurate.

Migrants who are accompanied by their families abroad, apart from the possibility that they might lose contact with home, might have higher expenditure abroad than the unaccompanied migrants. This indicates that the capacity of accompanied migrants to remit would be reduced, and thus remittances would fall if the migrant takes his family abroad. This would suggest a negative relation between MR and PFAM. The proxy used for this variable in estimation, is a dummy variable equal to unity if the migrant is accompanied by the family abroad, and zero otherwise. If the migrant is married, his commitment to send remittances home might be higher than the single migrants, and probably would have more dependents too. In this sense one would expect that married migrants would send larger amounts of remittances than the unmarried ones. However, the married migrants can take their families abroad, and thus their capacity to remit might be less than the unmarried. In this sense one would expect less remittances from married migrants. Thus the relation between marital status of the migrant and the volume of remittances he sends home does not seem to be very clear, although it is more

likely that this relation is positive rather than negative. Marital status is approximated by a dummy variable equal to unity if the migrant is married, and zero otherwise. Both married and single migrants might have dependents at home to whom they have to send remittances. Thus the number of dependents is used to explain the volume of remittances from abroad. The hypothesis is that the higher the number of dependents, the higher the volume of expected remittances i.e. a positive relation is expected between MR and NDEP. The number of dependents as stated by each migrant is entered in the estimation. It is worth mentioning that we choose to use the number of dependents, rather than the number of children, in explaining the determinants of remittances, because the latter would exclude single migrants who have dependents at home. Using both the number of children and the number of dependents as separate explanatory variables would increase the possibility of multicollinearity. Both variables, however, were used alternatively, and it was the number of dependents which produced the more plausible results.

Migrants are assumed to take some time to settle themselves abroad before they start sending remittances home. I_n this way recent migrants might remit less than those who have migrated for longer periods. This would mean that the volume of remittances is expected to increase with the increase in the period since out-migration, and thus a positive relation could be expected between this variable and the dependent variable. However, long standing migrants might tend to bring their families abroad and lose contact with home. If

this is the case, then remittances would fall with the increase in the period since out-migration, and thus a negative relationship with the dependent variable could be expected. In this way either observed sign between the volume of remittances and the period since out-migration could be explained. As a measure of the period since out-migration, the last two digits of the year of entry to Saudi Arabia is used.

Having established the underlying rationale for using variables in equation (8.4.1) to explain the volume of remittances, we turn now to estimate this equation and report the results. The data were generated from the results of the migrants' survey. Using monthly remittances in cash as the dependent variable, the result of estimating equation (8.4.1) by OLS is as follows, with standard errors of the coefficients in parenthesis:

$$MR = -357.828 + \underset{(0.013)}{0.108\ INC}^{***} + \underset{(37.529)}{132.747\ ALLOW}^{***} + \underset{(4.879)}{19.367\ NDEP}^{***}$$

$$\underset{(55.859)}{-399.669\ PFAM}^{***} + \underset{(37.624)}{22.699\ MSTAT} + \underset{(4.216)}{5.563\ YENT} \qquad (8.4.2)$$

$$R^2 = 0.30,\ F = 21.206,\ D\text{-}W = 1.8558,\ n = 310$$

Notes: R^2 is R-squared, F is the F-statistics, D-W is Durbin-Watson statistics, n is the number of observations, and *** indicate that the variable is significant at 1% level of significance.

All the coefficients in equation (8.4.2), except those for MSTAT and YENT, are significantly different from zero at 1% level of significance. Moreover, all variables have the

right expected signs, with PFAM being a clear deterrent to the volume of remittances. The results indicate that the variables which are of significant importance in determining the volume of cash remittances from abroad are the first four variables. However, although the small value of R^2 indicates a somewhat poor fit, yet the highly significant F-value indicates that the variables jointly do explain variations in cash remittances.

8.5: Frequency of remittances

Just as it is important to know about the size and determinants of remittances, it is also important to know about their frequency. How frequently migrants send remittances in cash is shown in Table B13 in Appendix B. While more than half of migrants send remittances occasionally, about 30% of them remit monthly. Of those who remit occasionally, about 54% remit three or four times a year, 32% remit five or six times a year, while only 8% remit once or twice a year and 6% remit more than six times a year. This indicates a reasonable frequency of remittances. When the frequency of remittances is broken down according to different socio-economic characteristics of migrants, it seems that each group remit as frequently as any other. Recent migrants, however, remit more frequently than others, 52% of them sending remittances monthly. Presumably recent migrants send remittances as frequently as possible so as to settle debts incurred as a result of migration, and the basic needs of dependents at home.

8.6: Channels of remittances

There is no doubt that remittances in cash would improve the position of the balance of payments. However remittances sent through channels other than the official banking system might never add to foreign exchange earnings. Remitting through a 'black market' secretly, or with people going home, or keeping savings abroad might never add to the balance of payments. This calls for the investigation of channels through which remittances are sent home. Table B14 shows the channels of remittances usually used by migrants when sending remittances home. It is evident from the table that three main channels are used by migrants to remit home. These are through the official banking system, with people going back to The Sudan, and by paying in Saudi Arabia and receiving the equivalent in The Sudan, either themselves or their representatives at home. The three channels seem to be used equally by migrants, with a slight tendency to send remittances with people going home. Few migrants keep their savings and remittances abroad and take them home when they go home. These however are mainly those accompanied by their families abroad, who might need these savings abroad.

It is interesting to ask why migrants use channels other than the banking system so frequently. There could be more than one reason for this, apart from avoiding the bureaucracy of the banking system in handling remittances. Paying remittances in Saudi Arabia and receiving the equivalent in The Sudan, is the traditional 'black market' way of sending

remittances. This has always offered a higher exchange rate for migrants than the premium rate offered by the banks.(3) The 'black market' dealings in foreign exchange exist to satisfy the demand for foreign currency by nationals, especially when there are official restrictions on the amount of money transferred out of the country. The government is thinking now of legalizing such dealings in foreign currency, by giving licences to people who want to trade in foreign currency, besides the banks.(4) Because of this high rate it is profitable for migrants to send their remittances through the 'black market' rather than only the official banking system. Sending remittances with people going home, boils down to the same as paying abroad and receiving the equivalent in The Sudan. However, the exception here is that it does not necessarily take the 'black market' rate of exchange, but in many cases the official bank rate. Why do people use this method then? A good reason for this could be that this is sometimes more convenient for the recipient in The Sudan. It is much easier for the recipient to receive the money from someone who is arriving at his village, rather than from a bank which could be miles away from him. This argument is made more plausible, if we take into consideration the narrow spread of commercial banks in The Sudan, which tend to be concentrated in Khartoum and other large towns, in a vast country like the Sudan(5). Thus the problem is not only offering a higher rate of exchange by the official banking system, but also it has to do with the structure of the Sudanese economy in general, as well as the spread and

efficiency of the banking system.

8.7: Main uses of remittances

In many cases, and in the Sudan in particular, policy makers seem to be preoccupied by how to attract migrants' remittances in order to improve the balance of payments position, and very little attention, if any, is given to the utilization of these remittances. Given the proper direction, migrants' remittances could be of great help in domestic savings and investment, since they represent a high proportion of the average income of migrants before departure. To investigate how remittances are actually used at home, one should have information from the receiving end i.e. households who receive these remittances. However, since such data is not available we make use of information as to how migrants intend to spend their savings. Some idea about this is given in Table 8.2 overleaf.

The table clearly suggests that migrants intend to spend their savings on consumption items rather than in productive investment. However, it is always important to guard against the fallacy of treating all consumption as necessarily unproductive. For example, although family maintenance, including housing, education, and improved standard of living etc., represent consumption, this does not make it less desirable than investment. Thus it is always very difficult to draw a clear cut line between what should be considered as productive investment and what should be considered as consumption. In such cases any conclusions drawn on matters

Table 8.2: Intended use of savings by migrants

Purpose	Number	%
1. Invest in Agriculture	39	13
2. Commerce	54	17
3. Vehicles and transport	22	7
4. Restaurant, hotel or canteen	10	3
5. Industry and equipment	6	2
6. Private car	17	5
7. Marriage	62	20
8. Housing	113	37
9. Improve family living conditions	78	25
10. Study abroad	9	3
11. Other purposes	4	1
12. Don't know yet	13	4
13. Productive investment (1-5)	131	42
14. Consumption items (6-10)	279	90

Notes: (1) Percentage is out of the total sample of 310. Column (2) does not add to 100%, because a migrant could have more than one purpose for his savings.

(2) Row (13) = rows 1 + 2+ 3+ 4+ 5.

(3) Row (14) = rows 6 + 7+ 8+ 9+ 10.

Source: Migrants' Survey.

like the use of migrants' savings and remittances should be taken cautiously(6).

The table indicates that the majority of migrants intend to spend some of their savings in building or buying houses, getting married, and improving their family conditions. These are sssentially consumption items, although housing construction may work towards solving housing problems, and increase the building industry activities. Productive investment, on the other hand, is concentrated in commerce, especially grocery stores, etc., on transport equipment such as taxis, buses, etc., and on restaurants and hotels. Although some migrants intend to invest their savings in agriculture, very few of them intend to invest in industry. This is probably because their savings are too small to go into large industrial projects, or probably because they try to avoid the risks of undertaking large projects. In general, it seems that migrants intend to invest in small projects which require less capital, have quick returns, and probably no risk. However, if their savings were pooled, in some form of cooperative, or joint projects, they might be able to undertake large industrial investment. This is where the policy makers might be able to suggest projects, develop cooperatives, sell shares or bonds for certain projects to migrants, etc. Moreover, policy makers might provide feasibility studies, technical advice, etc., to be able to direct remittances to more productive uses.

8.8: Policies used to attract remittances

The government have adopted many policies to attract migrants' remittances from abroad. These policies include imports on nil-value basis, reductions and exemptions from customs duties, reduced prices for acquisition of housing land when paid in foreign currency, and an incentive rate of exchange for remittances. In this section, we review and critically evaluate these policies, in an attempt to identify their weaknesses and shortcomings as well as their advantages, and whether they have been successful or not.

8.8.1: Imports on nil-value basis

This system was introduced in 1972, and at that time any person could import goods into the country, as long as he could pay for the foreign exchange requirements for them in his own way. The system was meant to provide some essential goods without putting more strain on the balance of payments. After 1974, the system was confined to Sudanese migrants working abroad, and some regulations to define the goods which could be imported under the system were introduced. The list of approved goods varied from time to time. There is no information to show the extent of this policy in attracting remittances, nor whether the system is capable of providing goods for the domestic market, although a considerable proportion of migrants' remittances and savings are attracted. For example, in 1978, imports on the basis of this system amounted to £S 18.9 million, compared to £S 36.1 million in

cash remitted through the banks(7). In any case, however, many questions arise about this policy. For example there is the question about who is actually using this system; is it migrants themselves or other merchants who avoid paying tax in this way. Questions also remain as to whether the system is efficient in satisfying domestic demand. There is no way to ensure that migrants would import one commodity than another. Moreover, such a system might encourage 'black market' dealings in foreign exchange and in sending remittances home. Those who use the system might collect these remittances abroad to pay the foreign currency requirements of these imports. Furthermore, such a system might contradict with policies of offering an incentive rate of exchange to attract remittances through the banks. This is because either the migrant might spend his savings on goods imported under this system, and therefore he would be left with nothing to remit through the banks, or even if he has any, this might be remitted through the 'black market' which might offer higher rates to use remittances in purchasing these goods.

8.8.2: Customs duty exemptions

This system was introduced in July 1973. According to this, a migrant would get up to £S 700 exemption in customs duties on goods he imports, if he remits that amount through the banks. In July 1976, the maximum exemption was raised to £S 1500 plus 20% of any amounts above that if the migrant remits the equivalent of £S 1500 or more through the banks. Finally the system was completely abolished in March 1979(8).

Table 8.3 below shows the value of these exemptions.

Table 8.3: Total customs duty exemptions offered to migrants 1973/74 - 1978/79

	73/74	74/75	75/76	76/77	77/78	78/79
Exemptions (£S 1000)	10	152	449	2575	4852	6843
as % of total remittances	1.7	13.2	19.6	59.4	25.2	27.9
as % of export duties	0.1	1.4	3.7	20.4	36.5	58.5
as % of import duties	0.02	0.2	0.4	2.4	4.5	6.2

Source: Exemptions are from unpublished data from the Ministry of Finance and National Economy, Khartoum. Others are compiled from the Bank of Sudan "Annual Report" and "the Economic Survey" of the above Ministry.

The table clearly indicates the increasing value of exemptions offered to migrants. During the period under consideration, these exemptions increased about 684 fold. This increase has been much higher than the increase in remittances through the banks, which increased only 41 fold during the same period. This indicates that the increase in total remittances is not keeping pace with the increase in the value of exemptions. A main reason for this could be the way in which the exemption rate is put. Under the system, the migrant gets an exemption of £S 1500 for the first £S 1500 he remits, and then 20% of any amount above that. The rational decision for the migrant in this case might be that he remits £S 1500 where he gets 100% exemption, and above that he remits up to the point where he could get his goods

free of duty, or he might calculate the gains of remitting through the 'black market'. This policy might be more effective if a progressive rate, which would rise with the increase in remittances, was used. In this way migrants might be attached to the banks, and the government might minimize its loss of import duties. However, as a percentage of import duties, these exemptions constituted only a small share, although an increasing one. This indicates relatively small losses of revenue to the government. As a percentage of export duties, these exemptions are larger, reaching more than 50% by 1978/79. This raises the question, whether it is rational to use this policy to improve the balance of payments, or to reduce export taxes in order to encourage exports, and thus earn foreign currency through exports. It is certainly better to earn foreign currency through exports because of the unpredictable nature of migrants' remittances. However, the answer to such a question would also depend on the competitiveness of the exports and how far reducing an export tax would encourage these exports.

8.8.3: Emigrants housing scheme

This scheme was meant to sell government land for housing in Khartoum and other large towns, at reduced prices for migrants who can afford to pay the price in foreign currency. No information is available about the scheme. However, such a scheme would increase one of the push factors of migrations, namely migration to facilitate building a house. Thus, such a policy would induce more migration, which could have other

effects on the economy, apart from the effects of remittances. Moreover, the policy would encourage urban settlement by migrants on return home, as well as expenditure of remittances in these areas, and thus might increase the urban-rural gap. To solve the housing problem, it might be better to establish building societies, for example, or through the Estate Bank of Sudan, to attract migrants' remittances and use them in building houses. Having built these houses, they could be sold to migrants and non-migrants on an equal basis.

8.8.4: Incentive rate of exchange

To attract remittances from abroad, migrants were offered an incentive rate of exchange by the banks. Thus, before the June 1978 devaluation of the Sudanese pound, while the official rate of exchange was £S 1 = US$ 2.78 and the effective rate (a rate used for certain imports and exports) was £S 1 = US$ 2.50, the premium rate offered to migrants by the banks was £S 1 = US$ 1.75. In June 1978, the official rate was devalued to the effective rate, while the latter was set at £S 1 = US$ 2.00 the premium rate was not altered, but it was still higher than the effective rate. In March 1979, the customs duty exemption policy was abolished, and the premium rate was set at £S 1 = US$ 1.50. It was only in the September 1979 devaluation that the effective rate was set equal to the premium rate of £S 1 = US$ 1.25 and the official rate was set at £S 1 = US$ 2.00. The existence of such multiple exchange rates is always difficult to maintain in the short run.

Moreover, the 'black market' rate, as discussed above, has always been higher than the rate offered by the banks.

In general, policies introduced to attract migrants' remittances, do not seem to have fulfilled their goals. This is why some people have suggested restricting incentive policies towards migrants, and this is probably why some of these policies were abolished(9). However, as discussed above, some of these policies might have worked better if they had been properly applied. It seems that the problem is in the use of partial policies, and the pursuit of the narrow objective of improving the balance of payments, and at the same time policies were not used in conjunction with each other, some of them being in conflict with others.

8.9: Summary and conclusions

In this chapter attempts were made to assess the role of remittances from abroad and its implications for the economy of The Sudan. The evidence suggests that migrants send sizeable remittances, both in cash and in kind. The size of these remittances is determined by many factors, including the migrant's salary abroad, whether he is given allowances, whether he is accompanied by family abroad, as well as the number of dependents he has, etc. However, not all these remittances are sent through the banks. Channels other than the banks are used extensively by migrants. The evidence, moreover, suggests that remittances are largely spent on consumption rather than in productive use. Policies should

be adopted, not only to attract more remittances, but also to productively use them. These might be directed through the use of tax and incentives e.g. more tax on undesirable use and more incentives for items which are thought to be desirable.

Notes to Chapter Eight

(1) In 1972, the official rate of exchange of £S 1 = US$ 2.87 was depreciated to an effective rate of £S 1 = US$ 2.50 by means of a tax and subsidy scheme of 15%. In June 1978, the official rate was set at the effective rate, while this was depreciated to £S 1 = US$ 2.00. In September 1979, the official rate was set at the effective rate, and a parallel rate of exchange was established at £S 1 = US$ 1.25. In November 1981, the parallel rate was abolished and the official rate was devalued to £S 1 = US$ 1.11.

(2) More details of this test are in J. Kmenta (1971) "Elements of Econometrics" MacMillan 1971, p.136.

(3) Before March 1979, the premium rate offered to the migrants by the banks was about US$ 1 = £S 0.57. At that time the 'black market' rate was about US$ 1 = £S 0.65. In March 1979, when the banks rate was set at US$ 1 = £S 0.67, the 'black market' rate rose up to about US$ 1 = £S 0.80 - £S 0.85. In September 1979 when migrants were offered US$ 1 = £S 0.80 by the banks, the 'black market' rate rose to US$ 1 = £S 0.90 - £S 0.94. In July 1981, this was reported to have increased to US$ 1 = £S 1.05 - £S 1.06 (Sudanow magazine July and August 1981). After November 1981

devaluation when the banks rate was set at US$1= £S 90, the 'black market' rate rose to US$ 1 = £S 1.19 - £S 1.25.

(4) Sudanow magazine "Interview with the Finance Minister..." Khartoum, July, 1981, p.12-13. Also Sudanow magazine "Licensing foreign currency dealers: black market blues fade" Khartoum, August 1981, p.19-20.

(5) Out of all commercial banks in the country about 35% are located in Khartoum alone. For more details about banks spread, see Bank of Sudan "Annual Report" 1978.

(6) Other surveys undertaken among Sudanese migrants almost produced the same results as our survey. For the sake of comparison with Table 8.2 these aresults are reconstructed in the table overleaf.

The two authors however, differ in the conclusions they reach, mainly because in differences in where to draw the line between consumption and the productive investment. Abdalla, being a migrant himself, seems to be trying hard to prove that migrants do invest their savings productively. For this purpose he defines spending on agriculture, housing and marriage as productive investment, thus reaching the conclusion that "...the three priority areas were mainly in the nature of productive investment" p.39. Galaleldin, on the other hand, seems to be trying to prove the opposite, and thus he treats the productive investment as investment in agriculture and industry, and ignores the role of vehicles and transport, as well as commerce, etc. However, the reconstruction of their original results, as in the table overleaf, shows that both of them seem to

Table a: Intended use of savings by migrants according to surveys undertaken.

Purpose \ Survey	Galaleldin (a) No.	%	Abdalla (b) No.	%
1. Invest in agriculture	18	4	69	28
2. Commerce	113	23	4	2
3. Vehicles and transport			17	7
4. Restaurant, hotel or canteen			x	x
5. Industry and equipment	29	6	10	4
6. Private car	x	x	34	14
7. Marriage	83	17	65	26
8. Housing	125	25	66	26
9. Improve family living conditions	112	22	37	15
10. Study abroad	x	x	1	-
11. Other purposes	20	4	18	7
12. Don't know yet	x	x	x	x
13. Productive investment (c)	160	32	100	40
14. Consumption items (c)	320	64	203	81

Notes: x indicates that such a purpose was not used by the author.

- indicates less than 1%.

(a) For Galaleldin, to obtain the number of those who intended to improve family conditions, we added those reported by him as intending to buy durable consumption goods (17%) and those intending to buy non durable consumption goods (5%). Rows (2),(3) and (4) are one purpose according to him.

(b) For Abdalla, we made the following redefinitions (i) For housing, we added those reported as having the intention to "build a house" (23%) and those who intend to "finish a house" (3%). (ii) For improving family conditions, we use his purpose defined as 'consumption goods'.

(c) Rows (13) and (14) are our own additions and calculated as in Table 8.2 above.

Sources: (a) Galaleldin (1979) "External migration in The Sudan" ESRC, Khartoum, Dec. 1979 (Arabic) Table 14, p.45.

(b) Abdalla A.A. "Foreign Labour in the Yemen Arab Republic: a case study of The Sudanese migrants" Bulletin No.84, ESRC, Khartoum, Feb. 1980, Table 22 p.39.

stand on the opposite conclusion. In both surveys, it is the consumption items to which remittances and savings usually go. This of course does not mean that there is no productive investment as stated by Galaleldin, nor that productive investment is the main element as stated by Abdalla.

(7) Bank of Sudan "Annual Report" 1978.

(8) The system was abolished by the Council of Ministers Resolution No.145 dated 25 March 1979. On 2nd January 1980, however, the system was reintroduced for six months only i.e. up to June 1980, to allow those who remitted £S 1500 or more before March 1979, to make use of the exemption (for this point see "The Economic Survey" Ministry of Finance and National Economy 1979/80.

(9) Sudanese Socialist Union, Development Committee "Symposium on Migration" held on 27-30 December 1978, Khartoum, (Arabic).

CHAPTER NINE

FACTORS INFLUENCING MIGRATION: A REVIEW OF LITERATURE

9.1: Introduction

The aim of this chapter is to review the theoretical and empirical studies dealing with factors which influence the movement of labour across international boundaries. Most empirical models of the determinants of international migration has been concerned with the factors responsible for fluctuations in early European migration to the 'New World', or what is known as the transoceanic migration to the U.S.A., Canada, New Zealand and Australia. Migration between European countries, especially from Southern to Northern Europe have also received considerable attention. Studies on migration between developing countries seem to be very few, or non-existent. This is particularly true in the case of labour movement between MENA countries. This is probably because migration itself seems to have assumed a large scale only recently. The non-availability of data also seem to be one of the major limiting factors. Nevertheless, studies on early migration from Europe, or between European countries give some considerable insights into factors influencing labour migration. Section 2 presents a short summary of the pull-push controversy i.e. whether factors in receiving countries are important or those in sending countries. Section 3 presents the main theoretical approaches to the treatment of labour mobility. In Section 4, a review of some econometric studies in this area is presented, while the summary and conclusions are presented in Section 5.

9.2: The pull-push controversy

Most studies in the area of migration determinants seem to address themselves to the question whether the economic conditions in the destination country (the pull-factors) are more important in explaining fluctuations in migration than the economic conditions in the home country (the push-factors). A classic study addressed to this question is that by Jerome (1926), in which he concludes that the 'pull' elements were predominant in explaining European migration to the U.S.A. This view has found support from many authors, and was challenged by others. A brief summary of this controversy is presented by Gallaway and Vedder (1971), stating that

> "In recent years Jerome's conclusion has received support from a number of scholars, including Kuznets and Rubin, Easterlin, Fleisher, and Kelley ..... Others have challenged this view. Brinley Thomas states that 'the generally accepted view that immigration was dominated by the 'pull' of American economic conditions needs to be revised'....." P.886

Other studies which found support of the 'push' factors are many. Among these studies is the one by J.M. Quigley (1972) who concludes that

> "....it is unfair to conclude that the pattern of emigration during the period 1867-1908 was dominated by economic conditions in the U.S.A. The evidence indicates that the 'push' of domestic conditions in Sweden was at least as important in determining migration...." P.124

Recently in 1978, Magnussen and Siqueland have added new evidence to the dominance of the 'push' factors, stating that

> ".... we can conclude that variations in Norwegian wages had a greater effect on Norwegian emigration to the U.S.A. than equivalent variations in U.S. wages. Interpreted in relation to the pull-push scheme, our results show that the 'push' was greater than the 'pull'..." P.51

There are other studies which found support for both the push and the pull factors, some of which are reviewed in Section 4 below(1). However, the push-pull controversy seems to continue and to dominate the literature of international migration. However, one should ask what are these factors which influence labour migration. Or, what are the variables mostly used by these studies, and what is the rationale behind their use. We attempt to identify these factors in the next section.

9.3: Theoretical approaches to the study of labour mobility

The factors which influence a migratory movement are not always easy to trace, since these are several, some of which are of greater importance than others. Migration would depend on factors both in the sending and receiving countries. These factors could be economic factors, political, social, or demographic factors. The push-pull controversy does not seem to offer a clear cut answer. A migratory movement could be generated by both pull and push factors simultaneously. There are, however, different economic approaches to deal with this problem.

Several different economic approaches to the analysis of labour mobility appear in the literature. These various economic explanations have their roots in the economic theory

of why and how individuals move in response to differentials in labour market conditions. Two basic explanations in this respect, are the differential economic advantage and the job opportunity hypotheses(2). The first emphasises differential financial gains as an inducement to workers' movement, while the other places the greatest stress on job opportunity conditions. Both of these derive from simple supply and demand conditions in various labour markets. On the one hand, with increased demand for labour, wage rates rise and/or unemployment falls. Other things being equal, individuals in other labour markets are attracted into the market where wages have risen and employment opportunities have expanded. The response to wage levels embodies the differential economic advantages, while the impact of unemployment on mobility reflects the job opportunity thesis.

Another important approach to labour mobility is to treat migration as an investment in human capital decision, in which an individual would choose to migrate if his expected returns from migration are positive(3). According to this, what is important to the migrant is his expected net benefits from migration, rather than benefits at the present time. An individual faced with a migration decision will weigh up its net advantages i.e. benefits from migration minus costs incurred by the move. If expected lifetime benefits outweigh expected costs, he will choose to migrate. In other words, the individual will choose to migrate if the discounted present value of his expected net benefits is positive, i.e. migration is an investment decision.

These hypotheses, however, are not necessarily competing, rather, they might be incorporated into a single model of migration, since they use almost the same motives for migration. Monetary returns to migration are usually referred to as the income differential between the two countries if an individual chooses to migrate. The hypothesis is that, the higher the income differential between the two countries, the greater will be the tendency for individuals to move to the country with higher income levels. However, income differentials will only be meaningful if the individual can actually find a job in the destination country. Similarly, the foregone income in the origin country will be meaningful if the individual was originally employed at home i.e. income differentials would increase for those who were unemployed before migration. Thus unemployment and job opportunities in the two countries should be taken into consideration besides the income differential. Put another way, this amounts to saying that migrants are "pushed" from the origin country by the high unemployment rate (or the poor employment opportunities) and the low income, while "pulled" to the destination country by the high income level and the high employment opportunities.

Some attention, however, must be devoted to the specific form in which income differentials and employment opportunities are entered in a migration equation. For the potential migrant, the two are intertwined, since the latter could serve as a proxy for the probability of finding a job and earning the

income differential.[4] But employment opportunities and incomes in both countries could be entered separately in a migration equation, to assess the relative importance of the 'push' and 'pull' factors.

There are other factors which influence migration, besides the income differential and employment opportunities. Costs of migration not only include monetary costs, like foregone income, or travel costs, but there are also non-monetary costs. There are non-pecuniary costs of migration which relate to distance, for example, whether distance is viewed as an increasing travel cost, or a decreasing information flow. Moreover, there are factors which are likely to affect a migration decision, other than the economic ones. An important aspect of the decision to migrate is the availability of information about the labour market situation in the destination country. One way of obtaining information, or reducing information costs, is previous mobility. The importance of information was stressed by Nelson (1959), and also Fleisher (1963), who hypothesised that the role of information provided by the presence of friends and relatives abroad is a significant variable affecting the magnitude of migration. Also one type of psychic cost relates to the adjustment in the country of destination. The adjustment costs should be higher, the greater the inter-country differences in culture, language, etc. However, these adjustment costs might be reduced a great deal by the presence of relatives and friends and previous migrants, who might also

provide job information and initial help for new migrants. Thus, in many migration studies, previous migratory movements are used as an explanatory variable in the migration equation. This is because apart from the possibility that for personal reasons migrants might locate near relatives and friends, this variable also captures and measures the impact of factors such as the availability of information about labour market conditions in the destination country, etc. Thus, the greater the number of previous migrants from country i in country j, the more likely a migrant from i is to know someone in j who can provide him with such information and initial help, and thus the more likely he is to migrate to j rather than other countries.

Thus, there are many variables which are used to explain migration flows. These include income and employment opportunities in both countries, costs of migration, distance, previous mobility, as well as other variables. In summary, then, the typical migration function, estimated in most econometric studies dealing with the determinants of migration, is of the form

$$M_{ij} = f(Y_i, Y_j, U_i, U_j, C_{ij}, D_{ij}, M_{t-1}, O_{ij}) \qquad (9.1)$$

where

M_{ij} = net (or gross) migration from country i to j.

Y_i, Y_j = per capita income in i and j respectively

U_i, U_j = unemployment rates in i and j respectively

C_{ij} = costs of migration

D_{ij} = distance between i and j

M_{t-1} = previous migratory movement between i and j

O_{ij} = a set of "other variables" like age, educational levels, populations of i and j, etc.

It should be pointed out, that not all studies use the same number of variables in their equations, nor do they use the same definition of these variables. These usually differ according to the aim and scope of the study, the availability of data, etc. The next section shows how these variables have been determined in some empirical studies of migration determinants.

9.4: Empirical studies of migration determinants

Empirical studies dealing with factors influencing migration, usually use one or more of the variables in equation (9.1) above. However, they usually differ in the number of variables they use, as well as in the form which a specific variable takes in the equation. In this section, we present a summary of some econometric studies dealing with the determinants of migration. Only a selection is presented here, to reflect the use of variables in equation (9.1) above. Table 9.1 overleaf presents a summary of the results of some studies in this area. The table shows the most significant and commonly used variables in a migration equation. Some of these studies use variables which are not reported here, although, as explained in the notes to the table, most of these are either lagged or dummy variables. In general, the

Table 9.1: A summary of some econometric findings on determinants of migration.

Variables	Kelley 1965	Wilkinson 1970	Gallaway & Vedder 1971	Richardson 1972	Quigley 1972	Dutta 1972	Marr 1977	Magnussen & Siqueland 1978
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	-12.07	-12.347 (-1.002)	-23.10	604.1* (83.3)	37.140* (2.035)	-	-	-
Y_i	-8.10 (58.07)	-	1.90** (1.46)	2.92** (1.58)	-4.394* (2.021) -3.521* (2.976)	-0.20 (0.13)	-0.12** (4.22)	-1051.2* (-2.67)
Y_j	-5.28 (12.46)	-	0.01 (0.01)	2.30** (1.69)	6.834* (3.271) 1.449 (1.850)	0.25 (0.20)	-	188.5* (3.25)
$Y_i - Y_j$	-	1.367*** (4.635)	-	-	-	-	0.922* (1.44)	-
U_i	-	-	5.83** (1.46)	-1.16 (2.28)	-	-	-0.26 (0.13)	-
U_j	0.35** (0.09)	-	0.92 (0.37)	2.98* (1.51)	-	-	-0.29 (0.21)	-
M_{t-1}	0.62** (0.09)	0.234** (1.648)	-	-	0.389* (3.059)	0.72** (0.22)	-	0.035 (2.17)

Table 9.1 (Contd.)

Variables	Kelley 1965	Wilkinson 1970	Gallaway & Vedder 1971	Richardson 1972	Quigley 1972	Dutta 1972	Marr 1977	Magnussen & Siqueland 1978
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
P_i	-	0.058 (0.595)	-	-	0.466 (1.034)	-	-	-
P_j	-	0.035 (1.046)	-	41.75*** (10.08)	-	-	-	-
C_{ij}	-	-	-	-	-	-	-	21.3 (1.32)
B_{t-26}	-	-	-	-	1.243 (1.124)	-	-	-
R^2	0.79	0.71	0.62	0.743	0.84	0.88	0.84	0.275
D - W	-	1.86	2.09	1.95	-	-	1.51	-

Notes to Table 9.1:

(a) Figures in parentheses are t-statistics except for Kelley, Richardson and Dutta where they refer to the standard errors of coefficients.

(b) *, **, *** indicate variable is significant at 10%, 5% and 1% respectively.

(c) - indicate variable is not used in this study

(1) All variables are as defined in equation 9.1 above, except, P_i, P_j refer to output level in country i and j, Bt_{-26}^{j} is the birth rate in country i lagged 26 years. R^2 and D-W are R-squared and Durbin-Watson statistics respectively.

(2) Y_i and Y_j for Kelley are defined as growth rates of real per capita income i.e. ΔY_i and ΔY_j, as a measure of long-term economic welfare.

(3) P_j for Wilkinson is the output in j lagged one period, moreover, other variables (mainly lagged dependent and independent variables) are used and do not appear in this table.

(4) Gallaway and Vedder use other variables (mainly dummies) which are not reported here.

(5) P_j for Richardson is the gross domestic investment in j. Other variables are also used (population).

(6) Y_i and Y_j for Quigley are disaggregated into agricultural and industrial income. Thus there are two coefficients for each of Y_i and Y_j. The first refers to industrial income and the second to agricultural income, for each of them. P_i is the harvest in country i.

(7) Other variables are used by Dutta, mainly cost of living index in country i, and export prices of country j.

(8) $(Y_i - Y_j)$ for Marr is defined as income in j relative to income in another destination country.

(9) C_{ij} is defined as the ticket fare to destination country.

Source: These are taken from the relevant equation in each study. Where more than one country is used in the study, the equation referring to U.K. is reported here. When there is more than one equation for the same country, the one with the highest R^2 is reported here.

table shows per capita income - whether difference or income in each country - unemployment rates, previous mobility as well as output levels and investment in destination country as the most commonly used variables. Most of these variables show the right expected sign, with most of them being significantly different from zero. The relative importance of each variable might be clearer when we discuss each study separately in the following pages.

Kelley (1965) attempted to explain the factors governing U.K. migration to Australia in 1865-1935. He uses the unemployment rate, U_t, in both countries as the major explanatory variable, and dismisses the U.K. unemployment rate as being insignificant. Adding growth rates of per capita incomes in both countries, he finds them insignificant. Thus migration could be explained by the unemployment rate (labour market conditions) in the destination country showing that thus 'pull' factors are more operative than 'push' factors. The study uses $1/U_t$ rather than U_t as its explanatory variable. In general however, it is rather limited in the number of variables it uses, and ignores the income variable.

Wilkinson (1970), combines aggregate labour demand and supply into a migration function. He argues that the equilibrium flow of labour into the U.S.A. from a given European country is a function of output level in the two countries (which indicates shifts in demand for labour) and the difference in real wages (referring to the supply side of the labour market). To allow for adjustments in the labour market to reach the equilibrium level of migration flow, he introduces a distributed lag model. This introduces many lagged dependent and independent variables in his model,

although most of them turned out to be insignificant. He estimates equations to explain migration to the U.S.A. from different European countries separately. The study finds that employment opportunities in the U.S.A., measured by changes in output, is less significant than the 'push' factors. However, the introduction of many lagged variables might give rise to the problem of multicollinearity, besides, the Durbin-Watson test will not hold for testing for auto-correlation in the presence of the lagged dependent variable as an explanatory variable(5). Moreover, the data used in estimation was the manufacturing sector output in the countries in question, rather than total output.

Gallaway and Vedder (1971) set out to test the hypothesis that 'push' and 'pull' factors are both in operation simultaneously, using U.K. migration to the U.S.A. in 1860-1913. They postulate that migrants are 'pushed' from U.K. by the low wages and high unemployment, while being 'pulled' to the U.S.A. by the high wages and low unemployment rates. This model is extended to include the effects of business cycles, hypothesising that migrants would be affected by the "bad news" about economic opportunity in the U.S.A. As a proxy for this, five dummy variables were used, each referring to a particular year in the U.S. economy. Moreover, U.K. migrants to Australia, South Africa, and Canada were introduced as separate explanatory variables. The study found that both 'pull' and 'push' factors are in operation, although the 'pull' factors seemed to exert a stronger influence. However, the 'pull' factor was represented more

strongly in their equations (the dummy variables) than the 'push' factors. It might be argued that dummies could also be used to represent business cycles in the U.K.

Later, Richardson (1972) argues that fluctuations in investment in the destination country formed the main factor in attracting migrants. The conventional variables of income and unemployment rates in both countries, and U.K. population and investment in the destination country, were used to explain migration. Investment abroad was found to be the most significant variable in explaining 1870-1914 U.K. migration to Australia, Canada, U.S.A. and New Zealand. This being the only variable highly significant throughout all equations, he concluded that:

> "... these conclusions suggest a demand-determined model in which rising investment creates an increasing demand for labour ... Labour moved abroad not as a response to higher wages, or because slumps in Britain dried up new jobs at home, but rather because investment booms in the regions of recent settlement (destination countries) created employment opportunities overseas. Booms in these regions could not be accommodated by expansion in the indigenous labour force..." P.110

In explaining the Swedish migration to U.S.A. during 1867-1908, Quigley (1972) stressed that the 'push' factors are as important as the 'pull' factors. Using income in the U.S.A. to represent the 'pull' factors, and income in Sweden, the state of the Swedish harvest, and the lagged birth rate in Sweden as the 'push' factors, he sets out to test this hypothesis. A migration function was estimated for total migrants, agricultural workers, and non-agricultural workers. The income variable was disaggregated to agricultural

and industrial earnings, both in Sweden and U.S.A. The evidence indicated that the 'push' of domestic conditions in Sweden was important as the 'pull' factors, if not more so. However, the stress in this study is on the 'push' factors, and the 'pull' factors are represented by earnings abroad only, while employment opportunities were ignored. Moreover, variables like the state of the Swedish harvest might affect agricultural workers more than the industrial workers, for whom industrial output or unemployment rate might be more reasonable.

Recently, Magnussen and Siqueland (1978), using a human capital approach to the study of labour mobility, postulated that individuals will choose the alternative which results in the highest lifetime income for him. Thus, migration depends on lifetime wages in both origin and destination countries, as well as the costs of migration, assumed to be a once and for all cost (the price of a ticket is used as a proxy). Wages in the origin country, whether lagged or current, were found more significant, thus the "push" factors are more operative than the 'pull'. However, the study does not explicitly test for the significance of unemployment rates in either country. Employment opportunities cannot be ignored, since they would determine whether the migrant could obtain the expected income or not.

Marr (1977) differs from all these studies in pointing to the importance of alternative destination countries rather than only one receiving country. Thus "a potential migrant

has a whole range of countries to choose from" P.571. Thus, his explanatory variables are the inverse of the unemployment rate in both sending and receiving countries, the income in home country, and the income in destination country relative to another destination country. Taking one of his equations, U.K. migration to U.S.A. is formulated as

$$\frac{I_{US}}{P_{UK}} = c_0 + c_1 \frac{Y_{US}}{Y_A} + c_2 Y_{UK} + c_3 \frac{1}{U_{US}} + c_4 \frac{1}{U_{UK}} \qquad (9.2)$$

where I is UK immigration to USA, P is population, Y is income, U is unemployment rate and the subscripts US, UK and A refer to United States, United Kingdom and Australia respectively. In this way, what is important to the potential migrant is not only USA income, but this relative to Australia's. However, although the study shows that it is necessary to recognize explicitly the role of alternative destinations on migration, yet the introduction of destination income in this way produces another problem. This assumes knowledge, not only of a home and destination country, but also about a wide range of alternative destinations.

Dutta's (1972) study of Indo-Ceylon migration, 1920-1938, is one of those most similar to our own study, in the sense that, unlike the others, it deals with migration between two developing countries. Like the others, however, the study hypothesises that migration is induced mainly by increments in labour returns expected in the new region and the costs of migration. Thus, wages in both countries,

previous migration, as well as the relative prices of exportables in the destination country are the main explanatory variables. The higher the price of exportables, the more expansion in this industry, and the more demand for labour, thus more migration. However, although this is quite logical, yet it assumes that migrants are employed only in this industry. Finding wages in the origin country insignificant, the study prefers to use the cost of living indices in the origin country as a proxy for earnings, or a 'push' factor, which is found to be highly significant. In this way the study concluded that, although both 'push' and 'pull' factors are operative, conditions in the country of origin were dominant. The study, however, uses few variables, a problem which seems to be rooted in the scarcity of data.

As mentioned earlier, studies on migration in the MENA countries are very rare. To our knowledge, only one econometric study exists in this area. Azzam (1978), undertook a cross-section study to explain immigration to the oil-producing countries of MENA. The explanatory variables used to explain 1975 migration from country i to country j in the Arab region (M_{ij}), are relative per capita income growth rate ($\frac{\% \Delta Y_j/P_j}{\% \Delta Y_i/P_i}$), distance between i and j (D_{ij}), relative per capita income ($\frac{Y_j/P_j}{Y_i/P_i}$), relative temperature in principal cities (T_j/T_i), the stock of migrants from i in j in 1970 (SM_{ij}), percentage of population of i in rural areas (R_i), percentage of population of i in age group 21-29 (A_i), as well as migrants in j of origin other than i, as competing migrants (CM_j). Using combinations of these variables, equations were

estimated to explain 1975 immigration to Saudi Arabia, Kuwait, Libya, UAE, Qatar, and Bahrain, from other Arab countries, as well as a regression using pooled data together. Ten equations were reported in all, and an example of these is his pooled regression equation (equation 9, p.477), with t-statistics in parentheses.

$$\log\left(\frac{M_{ij}}{P_i}\right) = -0.88 + \underset{(0.947)}{0.274}\log\left(\frac{\%\Delta Y_j/P_j}{\%\Delta Y_i/P_i}\right) + \underset{(0.333)}{0.181}\log\left(\frac{A_i}{P_i}\right)$$

$$+ \underset{(2.451)}{0.623}\log\left(\frac{CM_j}{P_j}\right)^{*} + \underset{(11.118)}{0.731}\log\left(\frac{SM_{ij}}{P_i}\right)^{***}$$

$$R^2 = 0.789, \quad F = 42.277 \qquad (9.3)$$

The study finds that the most significant variable throughout all equations is the stock of migrants (SM_{ij}). This, however, is used as a proxy for information and initial help, although the study assumes a five year lag in the transmission of this information, since the stock of migrants in 1970 is used to explain 1975 migration. Moreover, some of the variables used are demographic variables, like age and rural population, while others are of little relevance, like the relative temperature. On the other hand, the study seems to ignore the economic motives of migration, namely income and employment opportunities. It might be interesting to test for these more explicitly.

9.5: Summary and conclusions

At the end of this chapter, it is appropriate to ask what conclusions can be drawn from the above review of literature? All studies mentioned above seem to start from the proposition that labour migration is a function of the benefits and costs associated with this movement. They move on to state that income gains and employment opportunities in both origin and destination countries reflect these benefits and costs. Other variables, notably previous migration as a proxy for information and initial help, are also used and found to be significant in explaining migration. Other variables used as a proxy for levels of economic activity and employment opportunities include output levels in each country as well as investment. Most of the above studies have dealt with the controversy of push-pull factors, and were concerned to determine which factor is predominant. In spite of evidence supporting both push and pull factors, the controversy seems to continue, with no clear answer.

Notes to Chapter Nine

(1) This review of push-pull controversy is not meant to be exhaustive. Other studies which found evidence of either or both, and are not reviewed here include D. Pope (1968), G.L. Chapin, R.K. Vedder and L.E. Gallaway (1970), J.J. Orsagh and P.J. Moony (1970) and Y.A. Tomaske (1971) etc.

(2) A summary of these propositions are in R.L. Raimon (1962), also in L.E. Gallaway and R.K. Vedder (1971) etc. A survey of trends in theoretical treatment of labour mobility could be found in J.C. Simmons (1970).

(3) This approach has been developed by L. Sjaastad (1962).

(4) M.P. Todaro (1969) in his rural-to-urban migration model suggests that urban income should be adjusted for the probability of finding a job in the modern urban sector, a proxy for which unemployment rate in urban areas is used.

(5) For this, see Z. Grilickes (1961).

CHAPTER TEN

DETERMINANTS OF MIGRATION FROM THE SUDAN

10.1: Introduction

In this chapter attempts are made to examine and investigate the economic factors which partially explain labour movement from The Sudan to the oil producing countries of MENA. In Section 2 a model is developed to test these factors. It is hypothesised that, in order to meet their demand for labour, oil producing countries in the region had to attract migrant labour into them. In other words, labour was attracted into these countries more strongly than it was pushed by factors internal to the emigration countries. Section 3 sets out to estimate this model, present the results and discuss them. At the end in Section 4, a summary and conclusions from the findings are presented.

10.2: The model

As pointed out in Chapter 9, the migration of labour could be explained in terms of net increments in labour returns expected in the new region. More generally, individuals move in response to economic and other forces. The economic and other incentives are connected with both the source and destination countries. It is the contention of this study that labour market conditions in the destination countries i.e. oil producing countries of MENA, have more influence on labour movements than those in the origin countries or the non-oil countries. Put in other words, it is hypothesised that, although both 'pull' and 'push' forces might be in operation, the 'pull' factors exert more

pressure on labour movements.

As discussed in Chapter Two, following the 1973/74 oil price rise, AOPEC countries were able to accumulate considerable surpluses of money, and their governments a considerable amount of revenue. Aiming at transforming these oil revenues into economic development these governments were able to draw up huge economic plans for development. The increased revenue and development expenditure led to increased economic activity in these countries. Given the relatively small and inexperienced population in these countries, it is clear that a major constraint on their rapid expansion would be a shortage of labour, and therefore there was the necessity to call on imported labour. It is in the context of this demand for labour that one should seek to explain the factors influencing migration in the region.

The increase in the demand for labour in the oil countries, pushed wages to levels which are extremely attractive to the workers in neighbouring non-oil countries. Thus workers were financially motivated to migrate to these countries. This was reflected in comparing earnings of Sudanese migrants in our migrants survey in Saudi Arabia with what they used to earn before migration. The first is considerably higher than the latter (Section 7.9). These substantial wage differentials give the individual an opportunity to increase his earnings and savings as compared with home employment. Thus for the individual migrant, high earnings abroad seem

to be the primary motive for his migration. Indeed, migrants in the survey, asked about their migration motives, listed financial gains from migration as their primary motive. Table 10.1 below gives some idea on these.

Table 10.1: Migration motives according to migrants in the sample.

Motive	Very important %	Less important %	Not important %	No answer %
(1) High earnings in Saudi Arabia	56	35	2	7
(2) Make savings	74	17	3	6
(3) Low earnings in The Sudan	35	55	3	7
(4) No job in the Sudan	-	1	90	8
(5) No suitable job in The Sudan	1	4	87	8
(6) Other reasons	7	6	0	87

Notes:- % is out of the sample of 310.
- indicates less than 1%.

Source: Migrants Survey.

For the individual migrant in the sample, the table clearly indicates that the financial motives were more important than the employment related motives. Moreover, migrants seem to be attracted by the high earnings abroad and the possibility of making some savings, rather than only being pushed by the low earnings at home. Thus, economic conditions both in The Sudan and destination countries might have had some effect on migration.

To test, more explicitly, whether the economic conditions in receiving countries have more effect on migration than those in The Sudan, we use multiple regression analysis. The initial hypothesis is that migrants were 'pushed' from The Sudan by the low income and the high unemployment rate, and 'pulled' to the oil countries by the high income and the low unemployment rate. However, one problem in testing this hypothesis is the non-availability of the data, especially about unemployment rates. Moreover, given the highly restrictive migration in the region in the sense that a worker is not allowed - in theory - to migrate unless he has a work contract, what would matter then is the demand for labour. Even if there is unemployment in immigration countries, the increased level of economic activity might necessitate the import of certain types of labour not available internally to these countries. On the other hand an unemployed worker in the Sudan might not be able to migrate because he has no work contract. Instead of the unemployment rate, the demand for labour might be well approximated by the level of economic activity, which could measure the employment opportunities for migrants. As a proxy for the level of economic activity, output levels in each country could be used. The basic relation to be tested then is of the form

$$M_{s-j,t} = f(YD_{j-s,t} ; O_{s,t} ; O_{j,t}) \qquad (10.1)$$

where

$M_{s-j,t}$ is migration from The Sudan to country j, at period t.

$YD_{j-s,t}$ is the per capita income, or wage difference between country j and The Sudan at t.

$O_{s,t}$ represent output level in The Sudan at t.

$O_{j,t}$ represent output level in country j at t.

The income difference in relation (10.1) above would represent the financial gains to the migrants, while the output levels would represent the employment opportunities in both countries. The higher the income difference between The Sudan and country j, the more expected migration is. That is to say a positive relation is expected between $M_{s-j,t}$ and $YD_{j-s,t}$. The increase in the economic activity in country j would increase the demand for labour in this country and thus provide more employment opportunities for migrants, so inducing more migration. This indicates a positive relation between $M_{s-j,t}$ and $O_{j,t}$. The reverse holds for $O_{s,t}$, i.e. an increase in the level of economic activity in The Sudan would create domestic demand for labour, more employment opportunities, hence less migration. In the next section we attempt to estimate this migration equation.

10.3: Estimation and results

One of the limiting factors throughout this study has been the non-availability of data. In this chapter, data also posed a problem for the estimation of relation (10.1) above. Before presenting the results then, a word about the data is necessary.

In the absence of any information about wages in the Sudan or in the immigration countries, GNP per capita is used as a proxy for earnings in The Sudan and abroad. Because of the nature of income distribution in these countries being skewed towards the Sheiks and members of the Royal families, GNP per capita would be a poor proxy for migrants earnings. However in the absence of other information, there was no way but to use this. It is worth mentioning that non-oil GNP per capita was also used as an alternative proxy, but still produced the same results.

As a proxy for the level of economic activity or output, one of these three variables was used; either construction GDP, non-oil GDP, or gross domestic investment. We excluded oil because it does not provide employment for migrants (Chapter Two), and because of its non-existence in The Sudan. However, especially for the Sudan, each of the three variables was highly correlated with the income variable, since GNP per capita is highly determined by the non-oil sectors output. This relation would give rise to a problem of multi-collinearity in the estimation. To reduce this problem, the unemployment rate in The Sudan is used as a proxy for home employment opportunities and found to produce a better result, both statistically and in terms of economic meaning, than any of the other three variables. For the immigration countries we use one of the three original variables.

Finally the dependent variable $M_{s-j,t}$ also has its problems, since data on Sudanese migration to each country

is not available. However, making use of total migrants through the Labour Department we can construct a proxy for this variable. The statistics of the Labour Department, as discussed in Chapter Two, were estimated to form only about 30% of total migrants, and thus the total was adjusted by this factor. To find how many persons migrate to each destination country, we assume the distribution of migrants by destination country, as discussed in Section 2.4, to remain constant. Accordingly, it is assumed that about 70% of the total outflow is to Saudi Arabia, 20% to Libya, 3% to Kuwait, 1% to Oman, etc. Although these assumptions are questionable, there is no reason to believe that the distribution of migrants has changed considerably. However, the construction of the dependent variable in this manner would result in having the same variations in the dependent variable for each country. Thus in effect we would be explaining the total official migration from the Sudan. In other words, the question would be, if the total outflow was to Saudi Arabia, for example, what are the determinants of this outflow.

The best results were obtained when gross domestic investment in country j is used as a proxy for the level of economic activity in that country. However, it is the previous level of gross domestic investment rather than the current which gives the best results. Possibly when investment takes place it goes first into machinery, etc., and only later generates additional demand for labour. Moreover, it was the logarithmic form which produced better results than the

direct linear relationship between the dependent and independent variables. Presumably because the variables are growing with time, transforming the data into log form might produce more linearity in their relationship. Thus, the final form of equation (10.1) which is estimated and reported here is of the form:

$$\log M_{s-j,t} = \alpha_0 + \alpha_1 \log YD_{j-s,t} + \alpha_2 \log U_{s,t} + \alpha_3 \log GDI_{j,t-1} + \mu_t \qquad (10.2)$$

where

$M_{s-j,t}$ is as defined in (10.1) above.

$YD_{j-s,t}$ is the real per capita income difference between country j and The Sudan, measured as $(Y_{j,t}/P_{j,t} - Y_{s,t}/P_{s,t})$, where Y is real GNP at constant 1970 prices expressed in US$ and P is population.

$U_{s,t}$ is the unemployment rate in The Sudan.

$GDI_{j,t-1}$ is gross domestic investment, (or fixed capital formation) at constant 1970 prices expressed in US$ and lagged one period.

μ_t is an error term with the statistical assumptions of being normally distributed with zero mean and a constant variance σ^2, i.e. $\mu_t \sim N(0, \sigma^2)$.

The subscripts j, s, and t refer to country j, the Sudan and time respectively, and α_0, $\alpha_1 > 0$, $\alpha_2 > 0$, $\alpha_3 > 0$ and parameters to be estimated.

The rationale for expecting α_1 and α_3 to be positive was discussed above. In the case of α_2, it is expected that as the domestic unemployment rate increases (i.e. less job opportunities at home) migration would increase, and thus a positive relationship is expected. Variables are expressed in real terms in US$ to eliminate the effects of domestic inflation and exchange rate fluctuations.

Equation (10.2) is fitted to data for the period 1970-1979[1], using OLS method. Non-availability of data limited the study to only three destination countries; Saudi Arabia, Libya and Oman. However, with 90% of Sudanese migrants in Saudi Arabia and Libya, and with Oman representing other small countries, the analysis could well be expected to explain the reasons for migration from The Sudan. The results of estimating equation (10.2) are reported below[2]. Letters SA stand for Saudi Arabia, L for Libya, and O for Oman. Figures in parentheses are the t-statistics.

SA-1

$$\log M_{s-j,t} = \underset{(1.607)}{2.906^{*}} + \underset{(0.544)}{0.282} \log YD_{j-s,t} + \underset{(0.449)}{0.339} \log U_{s,t} + \underset{(2.923)}{1.197} \log GDI^{**}_{j,t-1}$$

$$R^2 = 0.88, \quad F = 15.383, \quad D\text{-}W = 2.631.$$

L-1

$$\log M_{s-j,t} = \underset{(2.827)}{-35.003^{**}} + \underset{(1.907)}{3.757} \log YD^{*}_{j-s,t} + \underset{(0.492)}{0.587} \log U_{s,t} + \underset{(1.535)}{1.916} \log GDI^{*}_{j,t-1}$$

$$R^2 = 0.70, \quad F = 4.627, \quad D\text{-}W = 1.719$$

O-1

$$\text{Log } M_{s-j,t} = \underset{(2.582)}{-6.251^{**}} + \underset{(2.901)}{1.875} \log YD^{**}_{j-s,t} - \underset{(0.404)}{0.481} \log U_{s,t}$$

$$+ \underset{(0.519)}{0.251} \log GDI_{j,t-1}$$

$$R^2 = 0.76, \quad F = 6.251, \quad D\text{-}W = 2.025$$

Notes: R^2 is R-squared, the coefficient of determination, F is the F-statistics, and D-W is Durbin-Watson statistics.

*,**, *** indicate that the variable is significant at 10%, 5% and 1% significance level respectively.

All variables in the three equations produced the right expected signs, except the unemployment rate in equation O-1. Moreover, all variables, with the exception of unemployment rate, are significantly different from zero in one or more of the three equations. Unemployment rate, being insignificant in the three equations, and with the wrong sign in one of them, indicates that the 'push' factors are less operative in inducing migration. Gross domestic investment in destination countries is significant in the case of Saudi Arabia and Libya, but not significant in the case of Oman. One should notice, however, that most migration is to Saudi Arabia and Libya rather than to Oman. The income variable, on the other hand, is significant in the case of Oman and Libya but insignificant in the case of Saudi Arabia. Oman being the furthest of the three countries from The Sudan, probably

needed a significant income difference to attract migrants in order to offset migration costs. As pointed out earlier, the income variable tended to be correlated with other variables, especially $GDI_{j,t-1}$, and this is why we do not use income in the Sudan and destination countries as separate variables. Added to this, the use of income difference rather than the income in each country separately would save one degree of freedom, which is needed because of the small number of observations. However, when income in The Sudan and destination country are used as separate variables to explain migration, income in the receiving countries is highly significant, while income in The Sudan is less significant, although with the right expected sign i.e. negative sign(3). This indicates that, while migrants are 'pushed' from The Sudan by low income, they are strongly 'pulled' or attracted to destination countries by the higher income. Thus, although, both 'pull' and 'push' factors are in operation, the 'pull' factors seem to exert more pressure on migration.

The results, so far, include only three explanatory variables. The demand for labour abroad, being one of the major causes of migration, could attract migrants from other countries and not only from the Sudan. Moreover, information about these income gains abroad and job opportunities are important for the potential migrant. Thus, it is clear that more explanatory variables should be added to equation (10.2) above. No information, however, is available about the number of non-Sudanese migrants in any of the immigration countries, and therefore we would not be able to test how

competition of migrants from other countries works as a deterrent factor for migration from the Sudan. We define a new variable $SM_{j,t}$, as the stock of Sudanese migrants in country j at period t. This variable would capture the effect of friends and relatives abroad in providing information for potential migrants, work contracts, as well as initial help. The equation to be estimated then is of the form

$$\text{Log } M_{s-j,t} = \beta_0 + \beta_1 \log YD_{j-s,t} + \beta_2 \log U_{s,t} + \beta_3 \log GDI_{j,t-1} + \beta_4 \log SM_{j,t} + \varepsilon_t \qquad (10.3)$$

where $SM_{j,t}$ is the stock of Sudanese migrants in country j at period t, ε_t is a random error term with the usual statistical assumptions, i.e. $\varepsilon_t \sim N(0, \sigma^2)$, and all other variables are as defined in equation (10.2) above, with β_i the parameters to be estimated.

It is hypothesised that the more the stock of migrants in j are, the more likely the migrant would find someone who could provide him with work contract, initial help and job information, thus the more likely migration would occur to country j, i.e. we expect $\beta_4 > 0$. Other parameters are expected to behave as in equation (10.2). The results of estimating equation (10.3) are reported below, with t-statistics in parentheses, and notes as in the set of equations SA-1 to O-1 above.

SA-2

$$\text{Log } M_{s-j,t} = \underset{(1.446)}{-2.798^{*}} - \underset{(0.226)}{0.257} \log YD_{j-s,t} + \underset{(0.489)}{0.396} \log U_{s,t}$$

$$+ \underset{(2.077)}{1.056} \log GDI^{**}_{j,t-1} + \underset{(0.543)}{0.488} \log SM_{j,t}$$

$$R^2 = 0.89, \quad F = 10.254, \quad D\text{-}W = 2.791$$

$t_5 = 2.57$ 2-tailed

L-2

$$\text{Log } M_{s-j,t} = \underset{(-2.368)}{-21.162^{**}} + \underset{(2.250)}{2.862} \log YD^{**}_{j-s,t} + \underset{(0.253)}{0.193} \log U_{s,t}$$

$$- \underset{(-0.016)}{0.016} \log DGI_{j,t-1} + \underset{(3.183)}{0.891} \log SM^{**}_{j,t}$$

$$R^2 = 0.90, \quad F = 11.285, \quad D\text{-}W = 2.635$$

O-2

$$\text{Log } M_{s-j,t} = \underset{(-0.168)}{-0.281} + \underset{(0.582)}{0.265} \log YD_{j-s,t} + \underset{(0.467)}{0.271} \log U_{s,t}$$

$$+ \underset{(2.855)}{0.989} \log GDI^{**}_{j,t-1} + \underset{(4.726)}{1.325} \log SM^{***}_{j,t}$$

$$R^2 = 0.96, \quad F = 26.946, \quad D\text{-}W = 2.635$$

The introduction of $SM_{j,t}$ into the equation improved the results both in terms of higher R^2 and F-value for Libya and Oman, where it is highly significant. In the case of Saudi Arabia, although it has the right expected sign, this variable is insignificant. The investment variable continues to be significant for Saudi Arabia and Oman, although is insignificant and has the wrong sign in the case of Libya. The unemployment variable continues to be insignificant in explaining migration. $SM_{j,t}$, as a proxy for information

would be expected to perform better in explaining migration if the movement of labour is free. Given the highly restrictive movement of workers in the region, in the sense that a worker cannot migrate officially without a work contract, information about opportunities abroad are made less effective in explaining migration. This, however, does not render this variable useless and irrelevant to the degree of not using it in a migration equation. Relatives and friends abroad provide potential migrants with these work contracts, as well as initial help on arrival, as well as job information after the migrant arrives abroad (Chapter Five).

The unemployment variable, being insignificant throughout the estimated equations is dropped out to see how the results behave. Estimating equation (10.3), without the unemployment rate in The Sudan, produced the following results, with t-statistics in parentheses.

SA-3

$$\text{Log } M_{s-j,t} = \underset{(1.464)}{-2.563} - \underset{(-0.123)}{0.130} \log YD_{j-s,t} + \underset{(2.245)}{1.065} \log GDI^{**}_{j,t-1}$$

$$+ \underset{(0.518)}{0.431} \log SM_{j,t}$$

$$R^2 = 0.89, \quad F = 15.569, \quad D\text{-}W = 2.514$$

L-3

$$\text{Log } M_{s-j,t} = \underset{(2.591)}{-21.259^{**}} + \underset{(2.484)}{2.890} \log YD^{**}_{j-s,t} + \underset{(0.007)}{0.006} \log GDI_{j,t-1}$$

$$+ \underset{(3.557)}{0.903} \log SM^{***}_{j,t}$$

$$R^2 = 0.90, \quad F = 17.803, \quad D\text{-}W = 2.464$$

O-3

$$\text{Log } M_{s-j,t} = \underset{(-0.215)}{-0.341} + \underset{(1.007)}{0.371} \log YD_{j-s,t} + \underset{(3.021)}{0.961} \log GDI^{**}_{j,t-1}$$

$$+ \underset{(5.127)}{1.287} \log SM^{***}_{j,t}$$

$$R^2 = 0.95, \quad F = 41.227, \quad D\text{-}W = 2.577$$

Excluding unemployment rates in The Sudan from the estimated equations, improves the results over the previous equations, in terms of higher values for R^2 and F-statistics. These are especially higher in the case of Libya and Oman. Moreover, variables which have been significant in the other previous equations, are also significant now, but with slightly higher t-ratios. Thus, home unemployment rate is not a strong variable in 'pushing' migrants from the Sudan. However, as discussed in Section 3.3.3, unemployment rate in the Sudan seems to be low, mainly because of the government policy of ensuring employment for most of the educated manpower. Under such conditions, one would not expect unemployment rate to behave differently than in the results above.

The improved results in the set of equations 2 and 3, however, have been at the expense of higher D-W statistics. Although statistical-tests on the significant presence of serial autocorrelation using this D-W test has been inconclusive, the relatively high D-W value indicates that we cannot rule out the possibility of serial autocorrelation. To reduce this possibility, equation (10.3) was re-estimated

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with an auto-regressive scheme to correct for the presence of serial autocorrelation. The auto-regressive scheme used here is the iterative method suggested by D. Cochrane and G.H. Orcutt in 1949, or what is known as Cochrane-Orcutt transformation of data(4). The method estimates ρ, the coefficient of first-order autoregressive scheme from OLS residuals i.e. from the equation $\mu_t = \alpha_0 + \rho\mu_{t-1}$, where μ_t are residuals obtained from fitting OLS to the original data. The dependent and independent variables are then transformed so that the residuals from the transformed data is roughly uncorrelated. The transformation is $\hat{x} = x_t - \rho x_{t-1}$, where $\hat{x}$ is the transformed variable and x_t, x_{t-1} are the original ones. Then OLS estimates are obtained using the transformed data. This process is repeated until ρ converges. It was shown that the procedure is convergent and that estimates possess optimal properties i.e. are consistent and asymptotically efficient(5).

Applying this procedure to the data, equation (10.3) was re-estimated to allow for auto-correlation correction. The results obtained are as follows:

SA-4

$$\log M_{s-j,t} = \underset{(-2.086)}{-2.813^{*}} - \underset{(-0.823)}{0.722} \log YD_{s-j,t} + \underset{(1.484)}{1.109} \log U_{s,t}$$

$$+ \underset{(2.974)}{1.254} \log GDI^{**}_{j,t-1} + \underset{(0.701)}{0.554} \log SM_{j,t}$$

$$R^2 = 0.96, \quad F = 26.512, \quad D\text{-}W = 2.619,$$

$$\rho = -0.608$$

L-4

$$\text{Log } M_{s-j,t} = \underset{(2.534)}{-24.513^{**}} + \underset{(3.217)}{3.237} \text{ log } YD^{**}_{s-j,t} + \underset{(1.325)}{0.887} \text{ log } U_{s,t}$$

$$+ \underset{(0.013)}{0.015} \text{ log } GDI_{j,t-1} + \underset{(2.174)}{0.801} \text{ log } SM^{**}_{j,t}$$

$$R^2 = 0.96, \quad F = 24.610, \quad D\text{-}W = 2.429, \quad \rho = -0.61C$$

O-4

$$\text{Log } M_{s-j,t} = \underset{(-0.307)}{-0.427} + \underset{(0.664)}{0.323} \text{ log } YD_{s-j,t} + \underset{(0.897)}{0.600} \text{ log } U_{s,t}$$

$$+ \underset{(4.072)}{1.154} \text{ log } GDI^{***}_{j,t-1} + \underset{(5.206)}{1.338} \text{ log } SM^{***}_{j,t}$$

$$R^2 = 0.98, \quad F = 64.383, \quad D\text{-}W = 2.003, \quad \rho = -0.584$$

In all three equations, R^2 and F-statistics are much higher indicating a better goodness of fit than previous equations. Moreover, all the significant variables in the previous equations are now significant with higher t-ratios. It is also noted that the t-ratio for the unemployment rate is higher than in the previous equations, but this variable is still insignificant.

Thus, the results, in general, confirm the hypothesis that both 'push' and 'pull' factors are in operation, but the 'pull' factors operate more strongly than the 'push' factors. Investment in the receiving countries have the most significant effect on migration. These results compare favourably with Richardson's (1972) results, in which he finds fluctuations in investment overseas the most important

factor inducing early migration from U.K. However, our results should be taken cautiously, and should be treated as tentative because of many factors. The important one of these is related to data. Apart from the small number of observations, which doubts the significance of these variables with such small degrees of freedom, one could also doubt the assumptions underlying the dependent variable's construction. The assumptions of constant share of migrants through the labour department out of total migrants, as well as the assumption of a constant distribution of migrants among receiving countries, might not hold true in any given time. This could be especially true in the case of Libya, with which political relations were completely broken off after July 1976, and no migrants were allowed officially to migrate from the Sudan to Libya. However, because of our assumptions to construct the dependent variable, this was reflected in the number of migrants to other countries too. In this way we found the same fluctuations in migration to each country. We are aware of this shortcoming in our data, but the least thing we could do is to call for better provision and collection of data in future research. To allow for this effect in the present study, equation (10.3) was re-estimated with a dummy variable equal to unity in 1977 and zero otherwise. This, however, did not change the conclusions arrived at, without using this dummy variable.

The second problem which affects our results is the specification problem inherited in this type of model.

The number of migrants in destination country is not only affected by the level of output, but also contributes to the increase in this output. Thus an interrelated relationship exists between the two of them. In this way a simultaneous equation model might produce more reliable results than the single equation model. Given the state of data at hand, we cannot undertake such a task. Such an application of a simultaneous equation model, although complicated, could be left for future research. However, the simultaneous equation bias in our results, if it exists, is probably weak, although we cannot state by how much. Previous output is used to explain current migration in our equations.

10.4: Summary and conclusions

The investigation undertaken in this chapter has shown that, as a result of the huge expansion in the economies of the AOPEC, and the increased development expenditure, labour has been attracted into these countries from the non-oil countries. The development expenditure and expansion in the level of economic activity in the oil countries have resulted in increased demand for labour in these countries. This has resulted in higher earnings relative to earnings in emigration countries. A direct and significant relationship has been found between fluctuations in the level of economic activity in these countries, as measured by gross domestic investment, and the number of immigrants into them. For the individual migrant, the economic or material benefits

have been an important motive for migration. Thus, income differential between the Sudan and the immigration countries, as well as the fluctuation in the level of investment in the oil countries, are the most significant variables in explaining migration from The Sudan. The 'push' factor of unemployment rate in The Sudan has been found insignificant. Relatives and friends abroad are also important in providing job contracts to potential migrants, as well as information and initial help. In general, then, the 'pull' factors of migration have exerted more pressure on migration from The Sudan than the 'push' factors. This, however, does not rule out that some of the 'push' factors were in operation. Nor does it negate the fact that, due to problems with data, our conclusions are tentative and should be treated rather cautiously.

Notes to Chapter Ten

(1) Data used in the regression analysis is in Table A12 in Appendix A.

(2) While gross domestic investment gives more plausible results, using construction GDP or non-oil GDP does not change the conclusions. For the sake of reference, however, equation (10.3) is estimated using these two variables and reported in Table A13 in Appendix A.

(3) When migration, $M_{s-j,t}$, is regressed on income per capita in the Sudan and destination country as separate variables, the following result is obtained, with $Y_{s,t}$ and $Y_{j,t}$ representing real per capita GNP, expressed in US$ and constant 1970 prices, in the Sudan and country j respectively. Figures in parentheses are t-statistics.

Saudi Arabia

$$\text{Log } M_{s-j,t} = \underset{(0.961)}{6.989} - \underset{(1.948)}{2.280} \log Y^{*}_{s,t} + \underset{(4.813)}{1.878} \log Y^{***}_{j,t}$$

$$R^2 = 0.83, \quad F = 16.529, \quad D\text{-}W = 1.647$$

Libya

$$\text{Log } M_{s-j,t} = \underset{(-1.239)}{-35.523} - \underset{(-0.360)}{0.788} \log Y_{s,t} + \underset{(2.452)}{6.240} \log Y^{**}_{j,t}$$

$$R^2 = 0.56, \quad F = 4.493, \quad D\text{-}W = 0.798$$

Oman

$$\text{Log } M_{s-j,t} = \underset{(-0.670)}{-4.923} - \underset{(2.919)}{3.009} \log Y^{**}_{s,t} + \underset{(5.524)}{4.126} \log Y^{***}_{j,t}$$

$$R^2 = 0.86, \quad F = 21.392, \quad D\text{-}W = 2.741$$

(4) Cochrane D. and Orcutt, G.H. (1949).

(5) Many econometrics textbooks contain discussion of auto-regressive disturbances. Examples of these are Johnston, J. (1963), Chapter Eight; Kmenta, J. (1971) p.269-297; and Maddala (1977), p.274-291.

CHAPTER ELEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The aims of this study were to investigate, critically examine and evaluate the nature and process of Labour migration from the Sudan for work in other countries, as well as to assess the causes of this Labour movement, and its implications for the economy of the Sudan and the individual migrant and non-migrant. The purpose of this chapter is to present a summary and some conclusions of this study. Many problems, however, were encountered in conducting this study. Section 1 of the chapter briefly states some of these. In section 2 some conclusions of the study are presented, while in section 3 some policy proposals are suggested.

11.1: Problems of data and econometric analysis

Before presenting the summary and conclusions of this study, we stress that these should be treated very cautiously, because of many difficulties, especially with the data. Some of these problems are spelt out in this section, not only to point out the weaknesses of the present study, but also in the hope that they might be avoided in future research in this area.

The analysis in this study draws on many sources of data, particularly the statistics of the Labour Department, our own survey among migrants in Saudi Arabia and two other surveys (Galaleldin, 1979 and Abdalla, 1980). In Chapter Two we have shown that the statistics of the Labour Department are unreliable, understate the number of migrants and clearly lack the necessary details for a thorough migration study. The other two surveys have their own problems too. Galaleldin, for example, does not state how the survey was undertaken, while Abdalla states that questionnaires were distributed among migrants at their places of work and collected from them, without stating any further details of how this was done.

Our survey in Saudi Arabia clearly has its own problems too. Apart from the small sample size, the survey had many difficulties which

suggests that it might not be particularly representative. As pointed out in Chapter Four, one of the main difficulties in conducting the survey was to obtain a suitable sampling frame to draw the sample from. Thus, the sample was chosen from migrants selected from Sudanese clubs in Riyadh and migrants at their places of work in Riyadh city. Some randomness was possible in selecting these clubs and places of work since these were selected from a long list of addresses by the use of a simple random sampling (with the help of random number tables). However, there was no way to ensure randomness for the respondents selected from each chosen club or place of work since no lists of names were available. Added to this are the difficulties of conducting the survey without the help of trained interviewers, the difficulties of obtaining the co-operation of Saudi authorities, and the fact that the survey was undertaken in Riyadh only which might not be particularly representative. However, given the absence of basic information and the limited time and facilities, it was impossible to conduct the survey other than in this way. Most of these difficulties might be avoided in future research as pointed out earlier in Chapter Four, with more time and facilities. These, however, suggest that the conclusions drawn from the present study are very tentative and indicative rather than conclusive.

The econometric analysis undertaken in this study has its shortcomings too. The estimated equation for the determinants of remittances in Chapter Eight, for example, apart from being based on the results of our survey whose conclusions are tentative as pointed out above, has another difficulty. Instead of the explanatory variables NDEP and PFAM - numbers of dependents and place of family - it would have been more appropriate to use the number of accompanying dependents and the number of dependents left at home. These could have been obtained if the question relating to them in the questionnaire had been properly asked. However,

given the time and limited resources, it was thought necessary to limit the number of questions asked. Again, this is a point that could be improved in a future study.

One of the major difficulties in our econometric analysis concerning the determinants of migration in Chapter Ten, was the non-availability of data, especially about the dependent variable; the number of migrants from the Sudan to each destination country. Because such detailed data was not available, we had to disaggregate the total number of migrants through the Labour Department. Obviously, as admitted in Chapter Ten, using seperate equations for each country is not proper under such conditions. However, since Saudi Arabia apparently receives nearly 70% of Sudanese migrants, the equations for Saudi Arabia were particularly important. This problem might be avoided in future research by better provision and collection of data. However, since published data is not available in the case of the Sudan, this might be overcome through the collection of unpublished data. An example of this is the statistics of the Department of Passport and Immigration in the Sudan, which we were unable to obtain.

Observing these difficulties as well as others noted in the relevant chapters of the study, one can only say that the conclusions of this study are tentative. In all, it could be said that, although the study has been an attempt in the right direction, it failed to draw precise conclusions, most of which could be drawn only by further research in this area. Nevertheless, the following section states some of these tentative conclusions.

11.2: Summary and Conclusions

Although Sudanese migration for work abroad started as early as the 1960's, it assumed large numbers only in the 1970's, especially after the mid 1970's. This migration is basically to the AOPEC,

especially Saudi Arabia and Libya. Although the numbers involved in migration do not seem to be very large, it is the rapidly increasing scale which seems to cause the most concern. However, this magnitude itself is in question, and actual migration is thought to be well above that recorded.

This migration seems to involve different types of Labour - unskilled, skilled, highly skilled as well as employed and unemployed labour. According to our survey, although a considerable proportion of migrants are unskilled labour, the skill composition of migrants seems to be skewed towards relatively skilled and trained manpower. This observation is also supported by the other two surveys referred to above as well as by the official statistics of the Labour Department. For example, out of all migrants through the Labour Department between 1974/75 and 1977/78, only 26.9% were classified as unskilled Labour (P.54). Thus it is not only the rapidly changing numbers, but also the skill composition of migrants which gives rise to most alarm.

The factors governing migration of labour relate to economic conditions in both emigration and immigration countries. Although problems with our econometric analysis, as pointed out in Chapter Ten and in the above section, do not allow precise conclusions to be drawn in this respect, the impression is that economic conditions in the immigration countries are among the most important factors inducing migration. The development expenditure and the expansion in the level of economic activity in the AOPEC, especially after the 1973/74 oil price boom, resulted in increased demand for labour in these countries relative to those in neighbouring non-oil countries, thus attracting workers to the Labour markets where earnings are higher. The fluctuations in the level of economic activity in the receiving countries, as measured by the level of gross domestic investment was one of the most significant variables in explaining migration. This is particularly true in the equations for Saudi Arabia, which is the major receiver of migrants. In all, the tentative conclusion is that the

'pull' factors of migration seem to exert more pressure on migration than the 'push' factors prevailing in the Sudan.

The net impact of this migration on the economy of the country depends on many factors some of which are measurable as well as others which are unquantifiable. However, in this study, it was not possible to quantify even those factors which are measurable in principle due to lack of data. Under such circumstances, it is very difficult to conclude with high precision whether migration has been beneficial of harmful to the economy of the Sudan. Nevertheless, the investigation in this study can give some indications in this respect. Due to the selectivity in the migration process, reductions in the labour force, especially skilled labour, might develop into an acute shortage if migration continues at the present rate and composition. The output losses due to migration, however, do not seem to be very serious at present because of the short period since migration occurred in large numbers. Although some migrants were already employed before migration, the country seems to be able to export some of its unemployed labour force. In the absence of migration abroad, unemployment and/or underemployment in the country might have been far more serious than their present levels.

One of the obvious benefits to the country is migrants' remittances from abroad. These increased considerably over the decade of the 1970's, especially after the mid-1970's. They began to represent a considerable proportion of the exports and imports of the country, contributing positively to foreign exchange earnings. However, the flow of remittances from abroad should not discourage the government from tackling the basic problems of the economy and finding a more reliable source of foreign exchange. Because of the unpredictable nature of remittances, they can not be depended upon as a regular source of income and foreign exchange earnings. More important also is the use these remittances are put to at home. Although some remittances seem to go into productive investment,

according to our survey most of them seem to be spent on consumption items. The other two surveys referred to above also report that migrants remittances are largely spent on consumption (P.187-189).

For the individual migrant, the financial gains due to migration seem to be considerable. As a result of migration, migrants are able to earn considerably higher amounts of money than before migration. Moreover, not only the migrant himself, but also his family at home seems to derive substantial monetary gains from migration. As a result of migration, migrants are able to send home amounts of money which far exceed what they used to earn for themselves and their families before migration. In this way they seem to be able to contribute to the improvement in the standard of living of their families at home, as well as other parts of the population.

11,3: Some policy proposals

In developing a strategy for migration for the country, consideration should be paid not only to the manpower aspects, but also to other aspects of the economy and society. A complete ban on migration, for example, might not only be ineffective, but would also violate the basic human rights of freedom of movement and residence. Such measures, moreover, would be meaningless unless suitable and sufficient opportunities in the country are created through further acceleration of the country's economic development, resulting in optimum utilization of manpower. Nevertheless, some basic regulations to organize the migration process might be desirable. So far the government has taken restrictive measures to control the migration of public sector employees. These are not allowed to migrate without permission from their employers. However, in view of the high illegal migration rates, such policies are bound to fail. However, since surplusses of some types of labour seem to exist in the country along with shortages in other types, the obvious strategy for the government is to monitor each category and regulate migration and

training accordingly. The Sudan, even if it pays special attention to the salaries paid to trained and skilled manpower, cannot compete with wages offered to migrants abroad. Nevertheless, the pay structure in the country could be changed so as to favour categories of labour which are thought to be in shortage. However, one should stress that a first step towards this is to reassess, more realistically, the supply-demand situation for labour in the country. In this respect, it is not only necessary to know the total number of workers migrating and how many of each, but more importantly the actual supply and demand for labour in the domestic economy. This involves the reassessment of the performance of the economy in general, as well as the employment, education and training programs. If, for example, the goverment continues to provide employment for all educated manpower, then education and training should be linked more directly to the growth in the public sector. Thus, co-ordination is necessary between economic planning, manpower planning and educational and training planning, and these last two should form an integral part of the first. All this might be attained through further research, not only in migration but also in the domestic labour market and other aspects of the economy.

To ensure that the country achieves the highest possible benefits from this migration, and avoids possibly significant losses, policies should be developed to attract migrants' remittances from abroad. However, since migrants actually do remit large amounts of money home, efforts should be made to ensure that these remittances are sent through the official banks rather than through other channels. Although policies have existed in this respect, they do not seem to have worked efficiently either because of problems with the policy itself or because some policies were in conflict with each other. Offering an incentive exchange rate for migrants, apart from the difficulty of sustaining a multiple exchange rate system for long periods, might not be the most effective method of

attracting remittances through the banks. The 'black market' has always offered a higher rate to migrants than the banks. Incentives which could be offered by the Government are those relating to the exemption of migrant from paying customs duties on their imported goods. Such a policy could be used with a progressive rate of exemption linked to the amount of remittances through the banks in such a way that exemptions would increase with the increase in the volume of remittances.

Policies regarding remittances should not concentrate only on how to attract them, but more attention should also be given to the use of these remittances at home. Migrants' remittances and savings could be directed from consumption to more productive use so as to facilitate the economic development process. Although this is difficult to achieve, yet there are some policies which might affect the use of remittances in one way or another. The proper use of a tax and incentive scheme, for example, might be helpful in this respect. More tax could be put on items considered to be undesirable, with incentives given for more desirable use of savings and remittances. The Government could also attempt to promote some development projects by selling shares, bonds, etc., either to migrants while abroad or at home. It could provide technical advice, feasibility studies, etc., for migrants to promote productive use of savings and remittances. It is worth emphasising, however, that it is not only the question of migration and remittances which needs some attention, but more important is the whole question of comprehensive planning to provide a more accurate and realistic assessment of the performance of the economy in general.

APPENDICES

APPENDIX A

Table A1: some economic indicators: Middle East and North African countries

Country	Population			A.L.R.	GNP	GNP per capita		a.g.r. of	Trade Balance	
	Total 1979 (1)	a.g.r. 70-79 (2)	% (3)	1975 (4)	1979 (5)	1979 (6)	a.g.r. 70-77 (7)	GDI 70-79 (8)	1970 (9)	1979 (10)
oil countries										
Algeria	18.2	3.3	49	37	28,940	1,580	2.1	11.4	-68	-953
Bahrain	0.4	7.1	..	47*	2,080	5,460	20.3	..	-4.2	48***
Iraq	12.6	3.3	51	26**	30,430	2,410	6.7	27.2	635	7300***
Kuwait	1.3	6.2	53	60	21,870	17,270	0.6	22.4	1149	13273
Libya	2.9	4.1	51	50	23,390	8,210	3.9	10.6	1723	9320
Oman	0.9	3.2	..	20**	2,570	2,970	4.0	..	181	1045
Qatar	0.2	10.3	..	33*	3,750	16,590	-0.4	..	163	2472
S. Arabia	8.5	4.5	52	33**	62,640	7,370	13.0	46.7	1260	25730
UAE	0.8	6.7	..	14*	12,990	15,590	-3.6	..	267	7303
non-oil countries										
Egypt	40.9	2.0	56	44	18,600	460	1.3	21.5	-267	-3589
Jordan	3.1	3.4	51	70	2,630	1,180	1.9	..	-130	-1038
Lebonan	3.1	0.8	55	68**	..	..	..	..	-413	-1530
Morocco	19.5	2.9	50	28	14,460	740	4.2	15.2	-137	-1143
Sudan	17.9	2.6	53	20	6,630	370	2.5	8.0	- 16	- 222
Syria	8.4	3.6	48	53	8,920	1,070	6.0	16.5	-135	-1132
Tunisia	6.2	2.1	54	55	6,950	1,120	6.5	11.4	-105	- 920
YAR	5.8	1.8	51	10**	2,421	420	..	..	-182	-1372
YPDR	1.8	2.3	51	10**	890	500	..	..	- 63	- 347

Notes: (1) Total mid-year population in millions.

(2) Annual growth rate of population 1970-1979.

(3) Percentage of population in working age (15-64).

(4) Adult literacy rate(%).

(5) Gross National Product (GNP) in million US$.

(6) GNP per capita in 1979 in US$.

(7) Annual growth rate of GNP per capita 1970-1977.

(8) Average growth rate of Gross Domestic Investment 1970-1979.

(9) Trade balance in 1970 in million US$,(- indicates deficit).

(10) Trade balance in 1979 in million US$,(- indicates deficit).

* As in 1970.

** As in 1974.

*** As in 1978.

.. Indicates data not available.

Sources:

(a) World Bank Atlas, 1973-1980.

(b) World Bank "World Development Report" 1980 and 1981.

(c) World Bank "World Tables" 1980, 2nd ed., John Hopkins University Press.

(d) IMF, "International Financial Statistics."

(e) UNESCO "Statistical Yearbook" 1978-1979.

(f) U.N. "Demographic Yearbook" 1980.

(g) U.N. "Yearbook of National Account Statistics".

Table A2: Migrant labour in the Middle East and North Africa, by origin and destination countries (1000), 1975.

Origin \ Destination	Algeria	Bahrain	Iraq	Kuwait	Libya	Oman	Qatar	Saudi Arabia	U.A.E.	Total	% (6)	% (7)
Egypt	1.0	1.2	7.0	37.6	229.5	4.6	2.9	95.0	12.5	391.3	31.1	21.8
Jordan	0.4	0.6	5.0	47.6	14.2	1.6	6.0	175.0	14.5	265.0	21.0	14.8
Lebonan	-	0.1	3.0	7.2	5.7	1.1	0.5	20.0	4.5	42.1	3.3	2.3
Morocco	0.3	-	-	-	4.9	-	-	-	-	5.2	0.4	0.3
Oman	-	1.4	-	3.7	-	-	1.9	17.5	14.0	38.5	3.1	2.1
Sudan	-	0.4	0.2	2.0	7.0	0.5	0.5	35.0	1.5	47.1	3.7	2.6
Syria	-	0.1	0.2	16.5	13.0	0.4	0.8	15.0	4.5	50.9	4.0	2.8
Tunisia	-	-	-	-	38.5	-	-	-	-	38.5	3.1	2.1
YAR	-	1.1	-	2.8	-	-	1.3	280.4	4.5	290.1	23.1	16.2
YPDR	-	1.1	-	8.7	-	-	1.3	55.0	4.5	70.6	5.6	3.9
Other Arab	-	0.1	-	18.0	-	-	-	2.0	0.5	20.6	1.6	1.1
Total Arab	2.3	6.1	15.4	144.2	312.8	8.2	15.2	694.9	61.0	1260.1	100.0	70.1
% (1)	0.2	0.5	1.2	11.4	24.8	0.7	1.2	55.1	4.8	100.0		
% (2)	23.5	21.0	23.4	68.7	93.4	11.6	28.1	89.9	24.3	70.1		
India	0.3	8.9	5.0	21.5	0.5	26.0	16.0	15.0	61.5	154.7	28.8	8.6
Pakistan	0.1	6.7	5.0	11.0	4.5	32.5	16.0	15.0	100.0	190.8	35.5	10.6
Iran	-	2.0	40.0	28.9	-	0.4	4.0	10.0	21.0	106.3	19.7	5.8
Other Asia	-	1.0	-	1.1	0.5	0.2	2.0	8.0	2.0	14.8	2.8	0.8
Europe and North America	6.1	4.4	0.5	2.0	7.0	2.8	0.8	15.0	5.0	43.6	8.1	2.4
Others	1.0	-	-	1.1	9.5	0.3	-	15.0	0.2	27.6	5.1	1.5
Total (non-Arab)	7.5	23.0	50.5	65.6	22.0	62.2	38.8	78.5	189.7	537.8	100.0	29.9
% (3)	1.4	4.3	9.4	12.2	4.1	11.6	7.2	14.6	35.3	100.0		
% (4)	76.5	79.0	76.4	31.3	6.6	88.4	71.9	10.1	75.7	29.9		
Total	9.8	29.1	65.9	209.8	334.8	70.4	54.0	773.4	250.7	1797.9		100.0
% (5)	0.5	1.6	3.7	11.7	18.6	3.9	3.0	43.0	13.9	100.0		

Notes to Table A2:

(1) - indicates no migrants recorded for this destination country or origin.

(2) % (1) represents distribution of Arab migrants by destination country as percentage of total Arab migrants in the MENA.

(3) % (2) respresents distribution of Arab migrants by destination country as percentage of total migrants in that country.

(4) % (3) represents distribution of non-Arab migrants by destination country as percentage of total non-Arab migrants in the region.

(5) % (4) represents distribution of non-Arab migrants by destination country as percentage of total migrants in that country.

(6) % (5) represents the distribution of total migrants (Arabs and non-Arabs) by destination country as percentage of total migrants in the region.

(7) % (6) represents the distribution of migrants by origin country as percentage of the relevant sub-total, i.e. migrants of an Arab origin as percentage of total Arab migrants in the region, while migrants of non-Arab origin as percentage of total non-Arab migrants in the region.

(8) % (7) represents the distribution of migrants by origin country as percentage of total migrants (Arab and non-Arab) in the region.

Source: abridged from J.S. Birks and C.A. Sinclair (1980) "International migration and development in the Arab region" ILO, 1980, Tables 10 and 13, p.135-137.

Table A3: Total population of the Sudan by age, sex, and rural urban, (1000), 1973.

Age group (years) (1)	Total population				Urban population			Rural population		
	Both sexes (2)	Male (3)	Female (4)	Sex Ratio (5)	Both sexes (6)	% of Total (7)	Sex Ratio (%) (8)	Both sexes (9)	% of Total (10)	Sex Ratio (%) (11)
Under 1	372.3	190.1	182.2	104	90.5	24.3	103	254.6	68.4	105
1 - 4	2067.7	1058.7	1009.0	105	336.3	16.3	103	1445.8	69.9	105
5 - 9	2464.4	1277.7	1186.7	108	391.5	15.9	101	1688.2	68.5	108
10 - 14	1560.2	824.0	736.2	112	298.5	19.1	108	1000.8	64.1	113
15 - 19	1217.2	603.5	613.7	98	262.6	21.6	113	732.4	60.2	92
20 - 24	1000.4	453.4	547.0	83	233.5	23.3	119	591.4	59.1	70
25 - 29	1212.8	539.6	673.2	80	250.8	20.7	121	760.1	62.7	69
30 - 34	904.3	429.5	474.8	90	171.2	18.9	129	560.2	61.9	81
35 - 39	919.8	471.6	448.2	105	166.3	18.1	127	597.4	64.9	100
40 - 44	641.5	334.5	307.0	109	110.0	17.1	128	408.6	63.7	104
45 - 49	487.5	267.5	220.1	122	84.4	17.3	128	322.1	66.1	120
50 - 54	393.4	208.9	184.5	113	64.4	16.4	115	255.1	64.8	108
55 - 59	208.8	116.6	92.2	126	36.4	17.4	126	138.8	66.5	123
60 - 64	241.6	130.7	110.9	118	38.2	15.8	111	161.8	67.0	112
65 - 69	126.5	72.0	54.6	132	21.2	16.8	125	85.0	67.2	126
70+	268.0	143.9	124.1	116	43.6	16.3	104	186.6	69.6	125
Unstated	27.1	16.0	11.1	144	1.7	6.3	204	15.5	57.2	128
Total	14113.6	7138.0	6975.6	102	2605.9	18.5	113	9204.5	65.2	98

Notes: (1) Sex ratio is (male ÷ female) x 100.

(2) Urban and rural population exclude the nomadic population, and thus may not add to total population.

Source: 1973 population census, provisional results, Volume 1, Table 12 (a, b and c), Department of Statistics, Khartoum, 1977.

Table A4: Population by province of birth and province of enumeration. 1973 census.

Place of Birth \ Place of enumeration	Khartoum	Blue Nile	Kasalla	Northern	Red Sea	Kordefan	Darfur	Bahrel Gazal	Upper Nile	Equatoria	Total
Khartoum	646,526	24,818	11,693	8,296	4,792	9,758	3,884	1,333	2,862	2,499	716,459
Blue Nile	69,312	2298729	22,353	5,634	3,128	18,014	6,376	1,241	14,050	2,107	2,440,944
Kasalla	11,386	15,065	649,390	6,251	4,822	2,376	1,659	146	381	764	692,240
Northern	123,059	47,239	36,283	783,047	37,848	9,396	2,984	688	3,083	3,038	1,046,665
Red Sea	4,590	3,224	9,331	3,680	206,764	1,156	1,310	1,771	422	953	233,201
Kordofan	85,265	13,438	15,643	7,294	6,720	1,590,952	21,836	3,181	36,412	8,201	1,910,342
Darfur	46,198	114,419	29,065	2,383	1,662	30,807	1571,867	4,697	4,800	3,122	1,809,120
Bahrel Gazal	7,595	3,522	937	718	532	7,938	6,168	1293356	3,880	4,408	1,329,466
Upper Nile	8,775	6,651	980	1,113	330	2,521	408	889	689160	8,112	718,959
Equatoria	7,032	2,438	1,032	734	433	4,110	948	3,080	3,793	634,094	658,042
Province not stated	1,955	4,236	1,091	286	810	4,124	3,615	10,766	774	4,407	32,064
Other countries	27,950	44,436	33,055	5,060	3,212	10,514	43,764	554	1,147	50,546	220,239
Not known	266	1,694	20	42	198	85	234	52	10	46	2,647
Total	1,040,621	2701307	810,873	824,558	271,252	1,691,751	1665153	1321745	760774	722,297	11,810,388

271,252

Source: 1973 population census.

Note: Population in this table does not include the nomadic population.

Table A5: Population born outside the Sudan by age, sex, and mode of living (1000), 1973.

Age Group (Years)	Total foreign born pop. (1)	% of Total pop. (2)	Male (3)	Female (4)	Sex ratio % (5)	Urban population			Rural population		
						Total (6)	% of total for.born (7)	% of total urban pop. (8)	Total (9)	% of total for.pop (10)	% of total rural pop. (11)
Under 1	4.2	1.1	2.1	2.1	100	0.9	21.4	1.0	3.3	78.6	1.3
1 - 4	22.0	1.1	11.3	10.7	106	4.4	20.0	1.3	17.6	80.0	1.2
5 - 9	23.4	0.9	11.3	12.0	94	5.3	22.6	1.4	18.1	77.4	1.1
10 - 14	13.2	0.8	6.9	6.2	111	4.4	33.3	1.5	8.8	66.7	0.9
15 - 19	14.0	1.2	6.2	7.7	81	5.4	38.8	2.1	8.5	61.2	1.2
20 - 24	17.5	1.7	7.1	10.4	68	6.7	38.3	2.9	10.8	61.7	1.8
25 - 29	23.3	1.9	9.8	13.4	73	7.7	33.0	3.1	15.6	67.0	2.1
30 - 34	18.9	2.1	9.2	9.7	95	6.7	35.6	3.9	12.1	64.4	2.2
35 - 39	18.7	2.0	9.7	9.0	108	6.8	36.4	4.0	11.9	63.6	2.0
40 - 44	16.2	2.5	8.3	7.9	105	6.0	37.0	5.5	10.2	63.0	2.4
45 - 49	11.2	2.3	6.1	5.1	120	4.2	37.5	5.0	7.0	62.5	2.2
50 - 54	11.2	2.8	6.5	4.7	138	4.0	35.7	6.2	7.2	64.3	2.8
55 - 59	5.6	2.7	3.4	2.2	155	2.0	35.7	5.5	3.7	64.3	2.7
60 - 69	10.6	2.9	6.1	4.5	136	3.9	36.8	5.6	6.7	63.2	2.7
70+	10.3	3.8	5.8	4.5	129	3.5	34.0	8.0	6.8	66.0	3.6
Total	220.2	1.6	110.0	110.2	100	71.9	32.7	2.8	148.3	67.3	1.6

Notes: (1) column (2) represents foreign born population as % of total population of The Sudan.
(2) column (5) = (column 3 ÷ column 4) x 100
(3) columns (8) and (11) are urban and rural foreign born population as % of urban and rural population of Sudan respectively.

Source: 1973 population census.

Table A6: Foreign born population by nationality, 1973

Nationality or country	No.	%
Nigeria	162,505	58.8
Chad	44,819	16.2
Ethiopia	20,348	7.4
Zaire	20,354	7.4
Egypt	11,806	4.3
Uganda	863	0.3
Other Africa	4,833	1.7
Total Africa	265,528	96.1
Yemen	3,242	1.2
Other Arab	576	0.2
Total Arab	3,818	1.4
India	1,307	0.5
Pakistan	125	0.05
Other Asia	678	0.2
Total Asia	2,110	0.8
Greece	572	0.2
Other Europe	1,383	0.5
Total Europe	1,955	0.7
Others	2,694	1.0
Not stated	150	0.05
Total	276,255	100.0

Source: 1973 population census.

Table A7: Work permits issued to foreigners in 1977/78, by nationality

Country or Nationality	No.	%
Egypt	1,065	21.4
Ethiopia	673	13.5
Other Africa	502	10.1
Total Africans	2,240	44.9
Yemen	219	4.4
Other Arabs	52	1.0
Total Arabs	271	5.4
India	447	9.0
Pakistan	167	3.4
Other Asia	36	0.7
All Asians	650	13.0
Britain	783	15.7
Greece	110	2.2
Other Europe	899	18.0
Total Europeans	1,792	36.0
Others	31	0.6
Total	4,984	100.0

Source: Department of Labour, "Annual Report, 1977/78," Khartoum.

Table A8: GDP by economic sector, 1955/56 - 1979/80 (selected years) as % of total GDP, at current prices (Sudan)

Sector/year	55/56	66/67	69/70	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	79/80
GDP at factor cost: (£S million)	229.9	533.4	701.5	761.1	832.4	896.8	1246.2	1510.8	1776.9	2091.0	2426.3	2784.4	3198.9
Agriculture*	60.0	33.0	37.6	38.7	38.8	38.4	41.4	38.7	33.9	33.4	32.8	32.1	33.5
Industry (manuf.)	4.5**	9.3**	9.3	8.9	8.9	8.9	8.6	9.2	8.4	8.4	8.4	8.3	8.2
Elect. & water	4.5	3.1	2.4	2.3	2.0	2.0	1.5	1.4	1.5	1.4	1.3	1.1	1.1
Construction	5.7	4.5	3.5	3.1	3.2	3.5	4.9	4.3	4.8	5.2	5.5	5.9	6.3
Commerce***	..	28.9	14.5	14.9	16.9	15.9	14.1	16.2	17.1	16.7	16.3	15.9	15.5
Transport****	7.5	6.3	7.3	6.7	6.2	6.9	6.0	5.9	10.4	11.0	11.7	12.4	13.1
Govt. services	6.7	8.3	11.6	11.5	11.8	11.7	12.9	10.0	9.3	9.4	9.5	9.7	9.8
Other services	..	5.1	13.5	13.9	11.8	12.4	10.3	13.9	14.2	14.2	14.2	14.2	14.2
Mining	..	..	0.3	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: * Agriculture, livestock, forestry and fishing.
** including mining.
*** Commerce, finance and real estate.
**** Transport and communications.
.. indicates data not available.

Sources: (1) Department of Statistics "National income accounts and supporting tables" Khartoum (different years).
(2) Ministry of Finance and National Economy "Economic Survey" Khartoum (different years).

Table A9: Estimates of additions to the labour force from the education system by level of education, 1970-79.

Year \ level of education	Primary	Intermediate	Secondary	Higher Institutes	University	Total (a)
1970	67,923	9,001	2,789	190	1,599	81,502
1971	72,994	11,284	4,192	200	1,768	90,438
1972	73,086	9,583	4,543	210	1,856	89,278
1973	71,403	10,802	6,344	343	2,185	91,077
1974	61,608	17,039	9,543	553	2,061	90,804
1975	65,156	24,147	12,790	470	2,574	105,137
1976	63,030	23,422	13,375	470	2,487	102,784
1977	63,760	26,303	14,366	585	2,419	107,433
1978	67,324	27,442	14,855	560	2,426	112,607
1979	69,550	29,602	16,269	588	2,547	118,556
Total	675,834	188,625	99,066	4,169	21,922	989,616

Notes: (a) Total excludes graduates from non-Sudanese universities, and university post-graduates because no data is available. These however are very few.

Source: (1) For the primary, intermediate and secondary graduates, because there was no data, the following equation is used to estimate the number of graduates for each level.

$$G_{i,t} = FS_{i,t-1} - I_{j,t} - R_{i,t} - D_{i,t}$$

where

$G_{i,t}$ = graduates of educational level i in period t.

$FS_{i,t-1}$ = Final year students of level i in the previous year, t-1

$I_{j,t}$ = Intake of the next level of education j at period t.

$R_{i,t}$ = Repeats of i at period t in the final year

$D_{i,t}$ = Deaths of i at t, out of the final year.

All this information was compiled from the UNESCO "Yearbook of Educational Statistics" different years, except data on deaths which was not available, and this was excluded. However, in the final result, deaths might cancel with students from non-Sudanese schools.

(2) For graduates of Higher Institutes and universities, data is compiled from the UNESCO "Yearbook of Educational Statistics" and the "Economic Survey" of the Ministry of Finance and National Economy, Khartoum (different years).

Table A10: Consumer prices and cost of living indices in The Sudan and Saudi Arabia, 1970 = 100.

Year	Consumer price		Cost of living index		
	Sudan	Saudi Arabia	Khartoum		Riyadh
			H.S. (1)	L.S.(2)	(3)
1970	100.0	100.0	100.0	100.0	100.0
1971	101.4	104.4	101.2	101.4	104.8
1972	115.1	109.0	109.5	113.3	109.3
1973	132.7	127.1	126.7	132.7	127.0
1974	167.3	154.2	157.3	167.4	154.2
1975	207.3	207.6	190.4	207.5	207.5
1976	210.8	273.2	194.2	211.0	273.0
1977	246.1	304.1	240.7	262.9	304.2
1978	295.0	317.0	288.9	313.9	317.2
1979	385.8	344.4	385.9	412.1	344.4

Notes: (1) H.S. is cost of living index for high salaried employees.

(2) L.S. is cost of living index for low salaried employees.

(3) Cost of living index in Riyadh is for an urban household with an average income of SR 600-899 per month, i.e. low salaried employees.

Source: (a) For consumer prices, IMF "International Financial Statistics Yearbook" 1980.

(b) For cost of living indices in Khartoum, "The Economic Survey 1979/80" Ministry of Finance and National Economy, Khartoum, (Arabic).

(c) For cost of living indices in Riyadh "Statistical Yearbook of the Kingdom of Saudi Arabia" Central Statistical Department, Ministry of Finance and National Economy, Riyadh 1980.

Table A11: Monthly remittances of Sudanese working abroad by source Arab countries - January 1975 - October 1979 (£S 1000)

Month/ Year		Bahrain	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen YAR	Total
1975	J	1.6	0.2	0.3	2.5	3.4	18.7	0.6	1.3	3.9	0.4	6.7	0.1	39.7
	F	7.7	0.8	0.9	1.5	4.5	45.0	0.6	0.7	5.9	0.4	9.4	0.2	77.6
	M	1.4	0.8	0.2	2.2	0.7	43.0	0.6	1.0	2.8	0.4	9.9	0.5	63.9
	A	1.5	1.9	0.3	2.9	0.5	69.2	0.6	2.0	2.4	0.6	9.3	0.1	91.3
	M	0.9	0.8	1.1	1.1	1.9	47.3	0.6	0.8	2.7	0.6	7.4	0.4	65.6
	J	1.5	0.8	0.6	2.0	1.9	78.5	0.6	1.9	8.2	0.6	9.4	0.4	106.4
	J	0.6	1.2	1.4	3.0	1.9	118.9	0.6	3.8	6.8	0.6	11.8	0.7	151.3
	A	0.6	0.8	0.3	2.9	1.2	64.4	0.6	2.2	5.3	0.2	4.8	0.4	83.7
	S	7.8	0.3	0.2	1.1	2.7	82.6	0.6	2.0	1.2	0.1	5.8	0.4	104.8
	O	1.5	0.8	0.4	0.8	2.5	98.1	0.4	3.6	1.5	0.2	8.4	0.5	118.7
	N	1.5	0.3	0.9	1.7	5.5	91.9	0.4	0.4	2.6	0.2	8.4	0.4	114.2
	D	2.5	0.8	1.6	3.6	0.7	84.4	0.9	1.7	7.2	0.1	8.4	0.8	112.7
1976	J	0.3	0.3	0.6	1.7	0.4	197.6	0.8	7.2	14.6	0.2	8.8	0.8	233.3
	F	0.3	0.3	1.2	1.2	1.0	145.4	0.4	3.0	10.0	0.3	7.6	1.5	172.2
	M	0.3	0.3	0.7	1.7	0.4	146.6	0.7	9.3	13.6	0.4	16.9	1.0	191.9
	A	0.7	0.2	0.3	2.4	0.5	168.1	0.8	10.0	10.6	0.4	16.7	0.6	211.3
	M	0.3	0.2	1.2	1.9	0.4	146.8	1.1	1.6	8.9	0.5	8.2	1.3	172.4
	J	0.3	0.4	0.7	6.4	0.2	188.6	1.4	2.1	15.1	0.6	26.3	1.3	243.4
	J	0.4	0.7	0.6	5.9	0.2	82.9	0.9	1.7	14.8	0.1	18.0	0.4	126.6
	A	0.7	0.2	1.0	7.8	0.3	132.4	1.4	0.9	64.0	0.3	10.3	0.4	219.7
	S	0.7	1.0	0.2	7.9	0.4	154.6	0.4	5.1	57.6	0.4	43.1	0.5	271.9
	O	0.7	0.5	1.9	4.5	0.4	87.7	1.7	6.4	40.1	0.1	20.6	1.3	165.9
	N	0.7	0.4	0.5	23.0	0.4	132.6	1.9	14.4	70.0	0.2	30.4	1.8	261.9
	D	1.4	0.6	0.7	17.0	0.4	160.0	1.0	32.8	63.3	0.3	88.1	1.5	367.1

Table A11: Monthly remittances of Sudanese working abroad by source Arab countries - January 1975 - October 1979 (£S 1000) (Contd.)

Month/ Year		Bahrain	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen YAR	Total
1977	J	5.3	4.1	4.3	17.1	6.0	208.9	1.0	17.6	188.6	1.1	67.4	6.5	527.9
	F	5.3	5.5	8.1	35.8	6.0	155.8	2.0	40.7	149.6	1.1	63.5	1.1	474.5
	M	5.3	5.5	9.5	11.8	9.2	128.7	2.7	55.9	149.8	1.1	77.5	7.6	464.6
	A	6.8	2.3	7.5	9.7	9.2	315.7	1.9	40.7	236.8	1.1	112.3	5.9	769.9
	M	5.3	5.5	11.2	6.3	10.6	258.6	4.0	61.8	260.8	0.5	176.9	3.5	805.0
	J	19.8	9.3	10.2	37.3	3.8	267.3	3.4	25.8	287.9	1.7	64.3	7.9	738.7
	J	27.3	8.8	20.7	43.8	6.0	448.9	3.7	24.7	273.1	1.1	79.0	10.1	947.2
	A	16.7	3.8	6.0	107.5	6.0	317.0	2.0	29.3	249.6	1.1	138.5	13.8	891.3
	S	13.5	9.6	11.2	77.1	6.0	447.1	3.4	78.4	264.9	1.1	99.7	10.9	1022.9
	O	30.4	6.7	11.6	159.0	2.3	521.2	3.6	45.0	462.3	1.1	114.0	7.3	1364.5
	N	61.4	4.2	11.2	144.2	6.0	313.1	10.0	34.9	444.5	1.1	184.2	8.1	1222.9
	D	127.8	8.8	22.7	184.9	6.0	201.3	14.9	33.9	483.9	1.1	143.7	21.6	1250.2
1978	J	82.7	3.9	13.6	115.9	8.5	234.2	29.4	19.8	326.0	0.9	113.7	10.4	959.0
	F	83.1	17.9	24.9	175.0	2.1	195.2	68.9	47.7	538.0	1.2	151.8	8.7	1314.5
	M	129.1	8.5	15.1	214.1	2.6	269.3	93.2	79.3	570.8	1.5	169.3	18.2	1571.0
	A	28.3	9.3	12.0	157.4	4.9	318.5	90.7	92.8	301.5	3.0	154.1	7.0	1179.5
	M	66.0	4.9	9.9	210.4	1.4	628.4	76.7	81.2	556.5	5.8	160.4	13.6	1815.2
	J	134.5	14.0	11.0	268.2	2.9	519.5	112.3	161.1	718.8	7.0	230.7	62.4	2242.4
	J	99.6	12.3	21.3	211.0	2.7	903.4	139.6	143.1	1031.7	9.7	358.9	118.6	3051.9
	A	203.5	8.5	24.0	215.4	2.6	420.3	176.0	136.2	604.8	6.4	190.0	60.9	2048.6
	S	202.7	14.3	13.1	282.8	2.6	499.3	168.8	65.6	781.6	3.7	179.2	143.2	2356.9
	O	159.2	16.6	19.6	171.1	2.6	207.3	168.5	101.5	571.1	8.2	183.5	62.2	1671.4
	N	143.5	28.5	15.1	247.2	2.6	202.2	189.8	117.5	521.6	9.6	218.5	79.1	1775.2
	D	99.5	28.5	19.3	210.3	2.6	214.1	146.0	103.8	326.8	7.8	228.9	54.1	1441.7

Table A11: Monthly remittances of Sudanese working abroad by source Arab countries - January 1975 - October 1979 (£S 1000) Contd.

Month/ Year		Bahrain	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arebia	Syria	UAE	Yemen YAR	Total
1979	J	37.6	14.6	14.6	196.6	7.4	353.6	37.1	65.6	391.5	14.6	411.4	34.8	1564.8
	F	55.2	17.7	6.7	132.2	15.2	460.7	25.7	27.8	435.7	7.4	122.1	48.2	1354.6
	M	72.8	-	6.8	100.0	-	409.4	24.9	41.5	543.2	-	92.2	31.1	1321.9
	A	46.0	-	-	159.2	-	296.3	52.9	88.5	390.8	-	333.0	108.3	1475.0
	M	15.3	-	-	179.3	-	399.3	74.1	121.9	514.2	-	130.6	98.6	1533.3
	J	45.5	-	-	158.4	-	281.2	83.4	98.4	416.3	-	120.7	112.6	1316.7
	J	19.2	-	-	153.7	-	257.9	69.5	78.9	374.6	-	162.7	92.2	1208.7
	A	23.8	-	-	188.8	-	248.1	39.5	41.2	283.5	-	144.6	72.4	1041.9
	S	39.7	-	-	134.1	-	353.7	68.9	83.5	494.4	-	196.0	79.0	1449.3
	O	36.8	-	-	190.2	-	476.3	188.4	187.8	700.0	-	246.6	103.4	2156.5

Notes: - indicates that data is unavailable.

Source: Unpublished data from the Bank of Sudan.

Table A12: Data used in regression analysis for estimating equation 10.2.

Year	GNP per capita in US$ at 1970 prices (1)				Construction GDP in million US$ at 1970 prices (2)				Non-oil GDP in million US$ at 1970 prices (3)			
	Sudan	Saudi Arabia	Libya	Oman	Sudan	Saudi Arabia	Libya	Oman	Sudan	Saudi Arabia	Libya	Oman
1969	201.1	468.7	1676.0	298.6	117.8	216.3	285.7	18.9	2782.2	1916.0	1689.9	75.8
1970	188.6	498.6	1702.1	300.0	115.5	207.5	286.8	25.4	2665.5	2054.6	1719.3	84.4
1971	193.0	579.3	1583.5	311.0	112.9	195.0	270.7	42.4	2796.8	1992.4	1633.8	106.3
1972	194.5	646.4	1423.2	332.6	112.9	220.9	368.1	49.2	2894.0	2120.8	1777.5	141.9
1973	199.7	756.5	1539.1	266.2	118.8	307.8	469.9	41.0	3050.3	2412.4	2008.7	129.5
1974	200.2	1055.5	1357.0	360.8	154.7	243.1	337.5	33.6	3142.0	1860.7	1433.4	106.1
1975	217.7	1241.4	1363.9	425.7	152.0	338.1	430.4	49.7	3521.6	1999.1	1801.4	149.9
1976	214.1	1264.7	1627.1	465.6	112.1	854.2	483.1	53.6	3569.3	3007.9	2023.6	172.8
1977	220.5	1497.5	1729.9	464.7	115.1	1463.0	524.7	46.6	3781.3	4122.2	2143.6	177.7
1978	194.8	1652.1	1835.1	464.2	95.0	1978.5	566.9	51.3	3392.8	4946.3	2289.5	169.9
1979	127.2	1894.7	1952.4	465.8	78.8	2338.3	616.9	50.1	2781.6	5845.7	2490.9	166.4

Table A12. Contd.

Year	Gross domestic investment Million US$ at 1970 prices (4)				Stock of Migrants (Number) (5)			Number of Migrants (6)		
	Sudan	Saudi Arabia	Libya	Oman	Saudi Arabia	Libya	Oman	Saudi Arabia	Libya	Oman
1969	271.8	742.2	979.3	23.0	-	-	-	2,102	420	30
1970	274.7	623.6	659.9	35.3	2,102	420	30	992	198	14
1971	250.3	527.9	697.2	74.0	3,094	618	44	1,797	359	26
1972	201.1	658.4	907.6	91.4	4,891	976	70	1,041	208	15
1973	269.8	949.7	1190.0	75.1	5,932	1,184	85	1,008	202	14
1974	579.9	825.2	894.3	100.6	6,942	1,386	106	1,500	300	21
1975	619.5	1179.6	1142.9	125.5	8,440	1,686	135	2,044	409	29
1976	640.5	2342.2	1103.0	142.3	10,484	2,095	218	5,822	1,164	83
1977	580.2	3358.5	1219.9	118.8	16,306	3,259	280	4,331	866	62
1978	479.8	4098.4	1362.8	124.6	20,637	4,125	533	14,476	2,895	207
1979	393.4	5010.6	1482.8	122.6	35,113	7,020	848	21,910	4,382	313

Source: (1) Columns (1), (2), (3) and (4) are based on data of the World Bank "World Tables" 2nd edition, John Hopkins University Press, 1980, except for 1978 and 1979 for which projections are made assuming the same 1970-77 growth rate. For the Sudan, however, the two years were obtained from the "Economic Survey" Ministry of Finance and National Economy, Khartoum, 1980/81. To obtain these variables at 1970 prices, GNP deflators in each country were used. To express them in US$, average yearly exchange rate for each country was used, which is obtained from the IMF "International Financial Statistics", as well as from the above source. Population in each country, to calculate GNP per capita, is obtained from UN "Demographic Yearbook" and the above two sources.
(2) Columns (5) and (6) were obtained using the Department of Labour statistics, Khartoum, and assumptions made in Chapter Two above about the distribution of migrants by destination country.

Table A13: OLS estimates of equation (10.3) using construction GDP ($CGD_{j,t-1}$) and non-oil GDP ($NOG_{j,t-1}$) as proxis for the level of economic activity in destination country. (t-ratio in parenthesis)

	Constant	$YD_{j,t}$	$U_{s,t}$	$CGD_{j,t-1}$	$NOG_{j,t-1}$	$SM_{j,t}$	R^2	$\bar{R}^2$	F	D-W
SA-1	-1.066 (-0.515)	0.237 (0.239)	0.588 (0.719)	0.947** (2.046)		0.055 (0.534)	0.89	0.81	10.097	2.883
L-1	-21.216** (2.312)	2.857** (2.283)	0.192 (0.251)	-0.002 (-0.001)		0.889** (2.102)	0.90	0.82	11.284	2.633
O-1	1.809 (0.598)	0.045 (0.073)	0.197 (0.282)	-1.349* (1.992)		1.278*** (3.570)	0.93	0.88	17.975	2.406
SA-2	-12.582 (1.854)	0.618 (0.426)	0.887 (0.937)		1.882* (1.562)	0.033 (0.025)	0.86	0.76	7.940	2.5612
L-2	-19.142 (-1.738)	3.116** (2.028)	0.121 (0.152)		-0.556 (-0.281)	0.934*** (3.416)	0.90	0.82	11.482	2.740
O-2	-4.311 (-0.639)	0.155 (0.203)	0.032 (0.039)		1.670 (1.176)	1.343 (2.266)	0.91	0.84	12.437	2.182

Notes: All variables are as defined in equations (10.2) and (10.3) in Chapter 10, except $CGD_{j,t-1}$ and $NOG_{j,t-1}$ are as defined in the heading to this table, R^2 is R-squared, F is the F-statistics, $\bar{R}^2$ is adjusted R-squared, and D-W is Durbin-Watson of statistics *, **, *** indicate the variable is significant at 10%, 5% and 1% respectively.

APPENDIX B

Data in this appendix is based on migrants survey in Saudi Arabia.

Table B1: Migrants by province of birth and last place of residence in The Sudan before migrations. (Numbers).

Province of residence / Province of birth	Northern	The Nile	Khartoum	Red Sea	Kasalla	Blue Nile	Gazera	White Nile	Southern Kordofan	Northern Kordofan	Southern Darfur	Northern Darfur	Southern region	Total
Northern	52	6	103	9	-	-	2	1	-	1	-	-	-	174
The Nile	-	4	19	1	1	-	-	-	-	-	-	-	-	25
Khartoum	-	-	39	-	-	-	-	-	-	-	-	-	-	39
Red Sea	-	-	3	5	-	-	-	-	-	-	-	-	-	8
Kasalla	-	-	1	-	2	-	-	-	-	-	-	-	-	3
Blue Nile	-	-	7	-	-	3	-	-	-	-	-	-	-	10
Gazera	-	-	22	-	-	2	7	1	-	-	-	-	-	32
White Nile	-	-	2	-	1	-	-	1	-	-	-	-	-	4
Southern Kordofan	-	-	7	-	-	-	-	-	-	-	-	-	-	7
Northern Kordofan	-	-	3	-	-	-	1	-	-	2	-	-	-	6
Southern Darfur	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Northern Darfur	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Southern Region	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside Sudan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	52	10	208	15	4	5	10	3	-	3	-	-	-	310

Notes: (1) - indicates no observation in the sample.
(2) The Southern region includes Equatoria, Upper Nile and Bahrel Gazal provinces.
(3) In comparison with Table A4 of Appendix A, it should be naoticed that in 1974, the following division was made to provinces a) Northern province was divided into Northern province and the Nile province b) Blue Nile province was divided into Blue Nile, Gazera and White Nile provinces c) Kordofan and Darfur provinces were divided into Southern and Northern Kordofan and Darfur respectively.

Table B2: Occupation abroad by occupation in The Sudan (%)

Home \ Abroad	Unskilled	Farmers	Skilled	Clerk	Accountant	Technician	Prof. & Admin.	No Job	Total
Unskilled	98	-	2	-	-	-	-	-	13
Farmers	97	-	-	-	-	-	-	3	9
Skilled	26	-	61	7	2	2	-	3	20
Clerk	4	-	8	58	23	-	4	4	8
Accountant	-	-	13	11	71	-	-	5	12
Technician	3	-	6	6	-	77	-	9	11
Prof. & Admin.	-	-	-	-	9	-	82	9	15
No job	31	-	6	9	29	3	11	8	11
Total	31	-	16	9	16	9	15	5	100

Notes: (1) Percentage is percentage of the relevant occupation in The Sudan, except for totals which are percentages of all sample 310.

(2) - indicates no observation in the sample.

Table 83: Employment sector abroad by employment sector in The Sudan.

Abroad / At Home	Agricul-ture	Manufac-turing	Construct-ion	Electric-ity and water	Commerce & trade	Transport & Commun.	Finance	Services	Mining & oil	Domestic servants	No job or answer	All sample
Agriculture	-	3	5	-	28	3	3	28	-	28	3	13
Manufacturing	2	4	4	4	34	8	28	11	-	-	4	15
Construction	-	-	7	-	7	-	-	86	-	-	-	5
Elect. & water	-	-	14	14	29	-	-	29	-	-	14	2
Commerce	-	8	-	-	54	15	-	-	-	23	-	4
Transport & comm.	-	3	3	-	16	29	3	19	-	13	13	10
Finance	-	-	-	-	40	-	20	20	-	-	-	2
Services	-	1	4	7	21	6	6	42	1	3	10	35
Mining & oil	-	-	-	-	-	-	-	-	100	-	-	0.3
Domestic servants	-	-	-	-	-	-	-	-	-	100	-	0.3
No job or answer	-	5	5	2	31	2	17	14	2	7	14	14
All sample	0.3	3	4	4	26	7	10	28	1	8	8	100

N.B.: Percentages are of the relevant employment sector in The Sudan. For all sample, percentage is out of total sample of 310.

Table 84: Occupation abroad and in The Sudan by level of education (%).

Occupation \ education	Cant read or write	Primary	General Secondary	Higher Secondary	Higher Institute	University 1st Degree	Post-Graduate	All sample
abroad								
Unskilled	97	69	42	4	-	-	-	31
Skilled	3	24	34	11	25	7	-	16
Clerk	-	-	8	24	7	7	-	9
Accountant	-	-	5	40	4	24	7	15
Technicians	-	1	8	13	43	2	-	9
Professional & admin.	-	-	-	1	18	49	93	13
No job or answer	-	6	3	6	4	11	-	5
In Sudan								
Unskilled	37	35	10	-	-	-	-	13
Farmers	43	23	-	-	-	-	-	9
Skilled	13	32	55	6	21	7	-	20
Clerk	-	-	5	28	-	2	-	8
Accountant	-	-	3	34	4	18	-	12
Technicians	-	1	8	17	57	-	-	11
Professional & admin.	-	-	-	-	18	56	100	15
No job or answer	7	7	18	15	-	18	0	11
All sample	10	23	12	26	9	15	5	100

Notes: (1) Percentages are percentages of the relevant educational level, except for all sample which refers to the percentage of the relevant educational or occupational level out of the total sample 310.

(2) - indicates no observation in the sample.

Table B5: Employment sector abroad and in The Sudan by level of education (%).

	Illiterate	Primary	General Secondary	Higher Secondary	Higher Institute	University	Post-graduate	All Sample
Abroad								
Agriculture	-	1	-	-	-	-	-	0.3
Manufacturing	7	-	5	2	4	2	-	2.6
Construction	3	3	10	2	11	2	-	4.2
Elect. & water	-	1	-	7	-	9	7	3.9
Trade & commerce	30	41	37	22	4	20	-	25.8
Transport & comm	-	6	5	16	4	7	-	7.4
Finance	13	4	-	22	4	11	-	10.0
Services	23	11	26	17	71	33	93	28.4
Mining & oil	-	-	3	1	-	2	-	1.0
Domestic serv.	23	21	10	1	-	-	-	8.4
No job or answer	-	11	5	8	4	13	-	8.1
In Sudan								
Agriculture	47	27	3	5	4	-	-	12.6
Manufacturing	10	24	8	24	11	3	-	15.2
Construction	3	-	-	4	21	4	13	4.5
Elect. & water	-	4	-	-	7	4	-	2.3
Trade & commerce	7	10	5	1	-	2	-	4.2
Transport & comm	10	9	18	13	7	2	7	10.0
Finance	-	-	3	2	-	4	-	1.6
Services	13	11	42	38	46	51	80	34.5
Mining & oil	-	-	-	1	-	-	-	0.3
Domestic servant	-	1	-	-	-	-	-	0.3
No job or answer	10	14	21	17	4	18	-	13.5
All sample	10	23	12	26	9	15	5	100

Notes as in Table B4.

Table 86: Job information channels by level of education and occupation abroad (%).

Channels / education and occupation	Labour exchange offices	Private Employ. Agencies	News-papers	Direct contact	Friends and Relatives	Business contacts	Other ways	Did not state
Education								
Can't read or write	10	-	-	-	63	-	3	23
Primary	13	1	1	3	65	-	-	17
Gen. Secondary	16	3	-	13	55	3	3	8
H. Secondary	7	2	18	4	55	7	-	6
H. Institute	14	-	25	21	21	11	-	7
University	9	2	16	18	40	7	2	7
Post-graduate	7	-	20	33	13	20	-	7
Occupation								
Unskilled	11	2	-	1	70	-	1	14
Skilled	14	-	16	20	44	-	-	6
Clerk	7	-	18	-	64	7	4	-
Accountants	13	2	13	4	65	2	2	-
Technicians	18	4	14	14	27	8	-	-
Professional & Admin.	10	2	24	26	17	19	2	-
All sample	11	2	11	9	51	5	1	11

Notes: (1) Percentage is percentage of the relevant educational or occupational levels. For all sample this refers to percentage out of total sample (310).

(2) - indicates no observation in the sample.

Table B7: Time spent in first job search by level of education, occupation abroad, way of entering Saudi Arabia, and way of obtaining a job contract (%)

Categories \ Time	Less than one month	1-2 months	2-3 months	3-6 months	more than 6 months	No job or answer
(1) Education						
Can't read or write	37	20	20	10	13	-
Primary	49	24	10	3	6	9
General secondary	63	5	8	8	13	3
Higher secondary	57	16	12	7	-	7
Higher institute	68	14	-	11	4	4
University	62	13	-	13	4	7
Post-graduate	93	-	-	7	-	-
(2) Occupation abroad						
Unskilled	46	20	14	7	11	1
Skilled	64	22	4	4	2	4
Clerk	50	14	14	18	4	-
Accountant	65	13	10	10	-	2
Technician	79	3	3	11	3	-
Professional & Admin.	79	14	-	2	5	-
(3) Ways of entering Saudi Arabia						
Work contract	67	17	9	4	1	2
For a visit or Hajj	34	15	10	19	15	8
Through other countries	72	8	4	4	4	8
Other ways	-	50	-	-	50	-
Did not state	50	7	-	-	-	43
(4) Ways of obtaining job contract						
Labour Office	100	-	-	-	-	-
Employment missions	86	-	3	7	3	-
Private employment agencies	100	-	-	-	-	-
Relatives & friends	40	33	15	7	1	4
Official secondment	100	-	-	-	-	-
Other ways	67	33	-	-	-	-
Did not state	45	12	9	12	11	11
(5) All sample	57	15	8	8	5	6

Table B8: Whether migrants change their jobs abroad and average number of job movements by education and occupation abroad.

Categories	Job Mobility			Average number of job movements (No.)
	Did not change job (%)	Changed job (%)	No job or answer (%)	
Education				
Can't read or write	53	47	-	1.8
Primary	42	51	7	1.5
General Secondary	58	39	3	1.5
Higher Secondary	67	27	6	0.5
Higher Institute	75	18	7	0.3
University	69	22	9	0.4
Post-graduate	100	-	-	0.0
Occupation				
Skilled	46	53	1	1.8
Unskilled	76	22	2	0.9
Clerk	68	32	-	0.7
Accountant	56	44	-	0.9
Technician	82	18	-	0.3
Professional & Administrative	91	7	2	0.1
No job or answer	-	12	88	-
All sample	61	33	6	0.9

N.B.: Percentage is out of the relevant group.

Table B9: Percentage of migrants in different income groups by occupation abroad.

Occupation / Income (Riyals)	All migrants		Unskilled workers		Skilled workers		Clerks		Accountants		Technicians		Professional & Administrative	
	S	TI	S	TI	S	TI	S	TI	S	TI	S	TI	S	TI
Less than 499	–	–	–	–	–	–	–	–	–	–	–	–	–	–
500-999	1	1	4	2	–	–	–	–	–	–	–	–	–	–
1000-1499	4	1	9	3	6	–	4	–	–	–	–	–	–	–
1500-1999	15	9	34	26	10	4	14	4	6	–	4	–	–	–
2000-2499	24	16	35	34	28	14	36	14	10	6	29	7	2	–
2500-2999	14	19	8	24	18	24	21	43	27	13	14	25	10	–
3000-3499	13	13	4	7	22	18	14	20	27	27	11	14	10	7
3500-3999	9	11	1	2	10	22	11	14	17	21	18	11	17	12
4000-4999	9	13	1	1	4	12	–	7	8	23	21	25	36	33
5000-5999	1	4	–	–	–	2	–	–	2	6	4	14	2	12
6000-6999	1	3	–	–	–	–	–	–	–	2	–	4	7	14
7000-7999	2	0.3	–	–	–	–	–	–	–	–	–	–	12	2
8000-8999	1	1	–	–	–	–	–	–	–	–	–	–	2	10
9000+	1	2	1	1	–	–	–	–	–	–	–	–	2	10
Average S(1)	2572	3113	1970	2327	2512	3032	2372	2857	2867	3510	3088	3781	4531	5553
Average S(2)	621	752	476	562	607	732	573	690	693	848	746	913	1094	1341
Average S(3)	388	470	297	351	379	457	358	431	432	529	466	570	683	838
Average S(4)	59	–	30	–	55	–	47	–	60	–	72	–	125	–
% (1)	1053	1275	1587	1873	1104	1331	1219	1468	1155	1413	1036	1268	875	1073
% (2)	658	797	990	1170	689	831	762	917	720	882	647	792	546	670

Notes to Table 89:

(1) - indicates no observation in the sample.

(2) S = monthly salary.

(3) TI = monthly total income i.e. monthly salary plus value of allowances

(4) Average S(1) = average S and TI for each occupational group in Saudi Arabian Riyals

(5) Average S(2) = average S(1) expressed in Sudanese pounds using the premium exchange rate of £S1 = 4.14 SR offered to migrants by the banks at the time of the survey.

(6) Average S(3) = average S(1) expressed in Sudanese pounds using the official exchange rate of The Bank of Sudan of £S1 = 6.63 SR at the time of the survey.

(7) Average S(4) = average income in Sudan before migration reported by migrants in the sample, in Sudanese pounds.

(8) % (1) = average S(2) as percentage of average S(4).

(9) % (2) = average S(3) as percentage of average S(4).

(10) Percentages for income groups are out of the relevant occupational levels.

Table B10: Percentage of migrants in different income brackets by level of education.

Education / Income brackets	Illiterate		Primary		General Secondary		Higher Secondary		Higher Institute		University		Post-graduate	
(Riyals)	S	TI	S	TI	S	TI	S	TI	S	TI	S	TI	S	TI
Less than 499	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500-999	-	-	3	-	3	3	1	1	-	-	-	-	-	-
1000-1499	13	3	10	3	3	-	1	-	-	-	-	-	-	-
1500-1999	30	20	27	25	24	11	11	1	4	-	-	-	-	-
2000-2499	43	47	30	25	29	16	24	12	14	4	9	-	-	-
2500-2999	7	23	7	17	21	32	23	28	25	14	4	4	8	-
3000-3499	7	3	9	8	8	21	18	18	11	14	22	16	-	-
3500-3999	-	3	6	10	5	5	9	17	18	21	20	11	13	-
4000-4999	-	-	3	4	5	8	6	12	18	21	22	36	28	20
5000-5999	-	-	-	-	-	3	-	4	4	14	2	4	7	20
6000-6999	-	-	-	-	-	-	-	-	-	4	4	11	7	13
7000-7999	-	-	-	-	-	-	-	-	-	-	2	-	27	7
8000-8999	-	-	-	-	-	-	-	-	-	-	-	2	7	20
9000+	-	-	1	1	-	-	-	-	-	-	-	2	7	20
Average S(1)	1900	2278	2069	2409	2249	2699	2415	2954	2962	3654	3168	3878	5637	6935
Average S(2)	458	550	500	582	543	652	583	714	715	883	765	937	1362	1675
Average S(3)	287	344	312	363	339	407	364	446	447	551	478	585	850	1046
Average S(4)	30	-	34	-	41	-	53	-	86	-	88	-	175	-
% (1)	1527	1833	1471	1712	1302	1590	1100	1347	831	1027	869	1065	778	957
% (2)	957	1147	918	1068	827	993	687	842	520	641	543	665	486	598

Notes: (1) Percentages for income groups are percentages of the relevant educational levels.
(2) Notes as in table B9.

Table B11: Ability to save, frequency of savings and the proportion of income saved by occupation abroad (% of the relevant occupation).

Variable	All Sample	Un-skilled	Skilled	Clerk	Account-ants	Techni-cians	Prof. & Admin.
(1) Ability to save							
Able to save	86	90	92	86	94	100	88
No savings	7	8	6	14	6	-	10
No job or answer	7	2	2	-	-	-	2
(2) Frequency of savings							
Monthly	26	19	32	36	29	39	28
Occasionally	59	70	58	46	65	57	62
No job or answer	15	11	10	8	6	4	10
(3) Proportion of income saved							
Less than 1/10	1	-	-	4	-	4	2
1/10	2	3	2	7	-	4	-
1/5	6	11	4	4	4	4	2
1/4	13	19	14	14	13	18	2
1/3	31	35	40	25	33	21	31
1/2	19	10	20	18	25	29	33
2/3	11	9	8	11	17	18	14
3/4	2	-	2	-	2	4	5
More than 3/4	-	-	-	-	-	-	-
No savings, answer or job	15	12	10	8	6	-	10

Table B12: Ability to save, frequency of savings and proportion of income saved by level of education (%)

Variable	Illiterate	Primary	General Second.	Higher Second.	Higher Instit.	Uni-versity	Post-grad.
(1) ability to save							
Able to save	87	82	92	92	89	78	87
No savings	13	8	5	2	7	9	13
No job or answer	-	10	3	6	4	13	-
(2) Frequency of savings							
Monthly	20	20	21	28	36	29	47
Occasionally	67	62	66	61	54	49	47
No job or answer	13	18	13	11	11	22	7
(3) Proportion of income saved							
Less than 1/10	-	-	-	2	-	2	-
1/10	3	3	5	2	-	-	-
1/5	17	3	8	6	-	4	7
1/4	13	20	13	16	7	7	-
1/3	43	35	40	22	32	24	33
1/2	7	13	8	24	29	24	40
2/3	3	7	13	15	18	13	7
3/4	-	-	-	2	4	2	7
More than 3/4	-	-	-	-	-	-	-
No savings, answer or job	13	14	13	10	11	22	7

N.B.: Percentage is the percentage of the relevant educational level.

Table B13: The decision to remit, average remittances, and the frequency of remittances by different socio-economic characteristics of migrants.

Categories	% who remit in cash	% who remit in kind	Average remittances a month per migrant									Frequency of remittances	
			in cash			in kind			Total				
			SR	PS	t	SR	PS	t	SR	PS	t	monthly %	occasionally %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) All sample	88	55	496	19	-	117	5	-	613	24	-	30	58
(2) Age													
Less than 20 years	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	88	55	475	23	-0.453	96	5	-1.311	571	28	-0.875	41	47
25-29	85	55	489	20	-0.201	111	5	-0.408	600	25	-0.317	23	62
30-34	90	55	522	17	0.624	123	4	0.384	645	21	0.711	35	55
35-39	91	50	560	19	1.034	130	5	0.446	690	24	1.051	26	65
40-44	95	63	459	19	-0.653	154	7	1.543	613	26	0.393	22	74
45+	100	80	486	16	-0.503	140	3	0.547	626	19	0.688	80	20
(3) Period since migration													
0-6 months	64	23	407	24	-1.224	44	3	-4.026***	451	27	-2.027**	52	13
$1\frac{1}{2}$ years	86	53	536	19	0.963	121	4	0.206	657	23	0.881	31	55
$2\frac{1}{2}$ years	88	48	520	22	0.494	103	4	-0.644	623	26	0.207	19	69
$3\frac{1}{2}$ years	94	79	500	18	0.098	168	6	2.250**	668	24	1.056	32	62
$4\frac{1}{2}$ years	98	65	509	20	0.338	150	6	1.541	659	26	0.977	20	78
$5\frac{1}{2}$ years	88	50	517	19	0.263	113	4	-0.111	630	23	0.190	38	50
$6\frac{1}{2}$ - $10\frac{1}{2}$ years	91	64	444	14	-0.827	127	4	0.402	571	18	-0.562	23	68
More than $10\frac{1}{2}$ yrs.	92	50	416	16	-1.487	77	3	-1.939*	493	19	-1.996**	38	54
(4) Marital status													
Single	85	53	500	22	0.153	103	4	-1.173	603	26	-0.273	31	54
Married	91	58	490	17	-0.184	134	5	1.176	624	22	0.326	29	63

Table B13: The decision to remit, average remittances, and the frequency of remittances by different socio-economic characteristics of migrants. (Contd.)

Categories	% who remit in cash	% who remit in kind	Average remittances a month per migrant									Frequency of remittances	
			in cash			in kind			Total				
			SR	PS	t	SR	PS	t	SR	PS	t	monthly %	occasionally %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(5) Place of family													
Abroad	87	50	366	8	-3.235***	117	3	0.038	483	11	-2.681***	31	57
In Sudan	88	87	518	23	0.853	115	5	-0.029	633	28	0.754	24	63
(6) Education													
Illiterate	100	70	484	24	-0.318	136	7	0.917	620	31	0.190	37	63
Primary	94	65	459	22	-1.104	121	6	0.275	580	28	-0.886	28	66
Intermediate	95	71	501	22	0.099	142	6	1.115	643	28	0.486	40	55
Secondary	85	49	559	23	1.517	92	4	-1.700*	651	27	0.820	28	57
H. Institute	82	25	441	15	-0.915	61	2	-2.468**	501	17	-1.642	21	61
University	73	51	440	14	-0.984	140	4	0.876	580	31	-0.473	31	42
Post-grad.	87	47	630	11	1.044	177	3	0.984	807	27	1.210	27	60
(7) Occupation abroad													
Unskilled	99	70	472	24	-0.866	131	7	1.053	603	31	-0.309	33	66
Skilled	96	56	561	22	1.459	109	4	-0.464	670	26	1.181	32	64
Clerk	89	68	498	21	0.040	119	5	0.089	617	26	0.069	46	43
Accountant	85	60	539	19	0.834	140	5	1.010	679	24	1.042	23	62
Technician	93	29	596	19	1.409	63	2	-2.465**	659	21	0.607	21	71
Profess. & Admin.	86	45	554	12	0.949	150	3	1.031	704	15	1.231	36	50

Table B13:

Notes: % is the percentage of the relevant group.

SR = Saudi Riyals

PS = Percentage of salary

t = the t-ratio to test the difference between average remittances, and calculated as follows:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{(\sigma_1^2/n_1 + \sigma_2^2/n_2)^{\frac{1}{2}}}$$

where $\bar{x}$ is average remittances, σ^2 is the variance, n is the number of observations and the subscripts 1 and 2 refer to any group of migrants and the total sample respectively. i.e. Cols. (5), (8) and (11) show the t-ratio to test the difference in average remittances between the group and the overall sample average. The observed t-ratio for the difference in average remittance of accompanied and unaccompanied (by family abroad) migrants is 3.720 which is significant at 1% level of significance.

*, **, *** indicate significant at 10%, 5% and 1% level of significance respectively. The theoretical t-ratios are 1.645, 1.960 and 2.576 respectively.

Table B14: Channels of remittances by socio-economic background of migrants.

Category	Through Banks (1) %	With people going home (2) %	Pay in SA and receive in Sudan (3) %	Keep in form of foreign exchange (4) %	Other channels (5) %
All migrants	62	66	63	21	4
(1) Age					
Less than 20 yrs.	-	-	-	-	-
20-24	55	69	59	12	2
25-29	62	62	55	20	5
30-34	60	65	69	33	4
35-39	74	68	59	15	-
40-44	70	89	93	15	7
45+	80	80	60	40	-
(2) Education					
Cant read or write	70	93	93	10	3
Primary	73	83	65	4	-
Intermediate	68	76	74	11	-
Secondary	59	62	54	28	7
Higher Secondary	68	39	60	39	4
University	42	42	47	24	4
Post-graduate	47	60	67	67	13
(3) Period since out migration					
0-6 months	39	39	32	-	-
1½ years	49	64	59	20	5
2½ years	60	67	65	29	4
3½ years	67	68	65	18	9
4½ years	80	80	78	33	2
5½ years	75	56	50	19	-
6½-10½ years	77	77	73	23	5
More than 10½ yrs.	75	79	75	17	4
(4) Marital status					
Single	56	63	59	19	4
Married	69	71	67	23	4
(5) Place of family					
abroad	63	52	59	48	7
in Sudan	62	88	63	16	3
(6) Occupation abroad					
Unskilled	71	92	80	4	1
Skilled	70	70	68	22	6
Clerk	71	79	57	14	4
Accountant	60	52	50	35	4
Technicians	57	61	57	39	4
Prof. & Admin.	55	43	62	43	10

N.B.: raw percentage does not add to 100% because a migrant can use more than one channel to send his remittances home.

Table 815: Ways of entering Saudi Arabia by level of education and occupation.

Education and Occupation \ Means/ways	Work Contract or Work Visa %	Visit or Pilgrim-age %	Through other countries %	Other ways %	Did not state %
(1) Education					
Can't read or write	63	37	-	-	-
Primary	59	35	1	-	4
Intermediate	67	24	8	2	-
Secondary	54	26	8	-	12
Higher Institute	86	4	10	-	-
University	51	27	20	2	-
Post-graduate	80	7	13	-	-
(2) Occupation abroad					
Unskilled	65	33	1	1	-
Skilled	70	16	10	-	4
Clerk	50	25	14	-	11
Accountant	54	31	8	-	6
Technicians	75	18	4	-	4
Prof. & Admin.	62	17	19	2	-
No job or answer	25	38	12	-	25
(3) Occupation in Sudan					
Unskilled	75	23	3	-	-
Farmer	52	48	-	-	-
Skilled	66	18	11	2	3
Clerk	58	23	8	-	12
Accountants	47	29	11	-	13
Technicians	77	15	3	-	6
Prof. & Admin.	67	16	18	-	-
No job or answer	40	46	6	3	6
(4) All sample	61	26	8	1	5

N.B.: % is out of the relevant educational or occupational level.

Table B16: Ways of obtaining job contract or work visa by level of education and occupation.

Education and occupation \ Ways	Labour Office	Employment Missions	Private employ. agencies	Friends and Relatives	Official Secondment	Other ways	Did not state
(a) Education							
Illiterate	10(16)	-	-	57(89)	-	-	-
Primary	11(19)	1(2)	-	45(76)	-	-	1(2)
Intermediate	16(24)	8(12)	5(8)	26(40)	3(4)	5(8)	3(4)
Secondary	9(16)	7(14)	2(5)	21(39)	9(16)	-	6(11)
Higher Institute	18(21)	32(38)	-	29(33)	7(8)		
University	7(13)	7(13)	2(4)	20(39)	7(13)	2(4)	7(13)
Post-graduate	7(8)	47(58)	-	-	27(33)	-	-
(b) Occupation abroad							
Unskilled	11(17)	-	1(2)	54(81)	-	-	-
Skilled	14(20)	22(31)	2(3)	24(34)	-	4(6)	-
Clerk	4(7)	7(14)	4(7)	25(50)	7(14)	-	3(7)
Accountants	15(27)	4(8)	-	25(46)	-	-	10(19)
Technicians	18(24)	14(19)	4(5)	14(19)	21(29)	-	4(19)
Prof. & Admin.	5(8)	24(38)	2(4)	5(8)	21(35)	2(4)	2(4)
No job or answer	-	-	-	25(100)	-	-	-
(c) Occupation at home							
Unskilled	17(23)	-	-	58(77)	-	-	-
Farmer	-	-	-	55(100)	-	-	-
Skilled	13(20)	16(24)	3(5)	27(41)	-	3(5)	3(5)
Clerks	8(13)	4(7)	4(7)	27(47)	8(13)	-	8(13)
Accountants	16(33)	3(6)	-	18(39)	-	-	11(22)
Technicians	18(23)	15(19)	3(4)	21(27)	18(23)	-	3(4)
Prof. & Admin.	8(10)	22(33)	2(3)	11(17)	20(30)	2(3)	2(3)
No job or answer	3(7)	6(14)	-	31(79)	-	-	-
(d) All sample	11(17)	9(15)	2(3)	30(49)	6(9)	1(2)	3(5)

Notes: as in Table B15. Figures in parenthesis refer to percentage out of those who entered Saudi Arabia with a work contract from the relevant occupation or educational level, thus % could add to 100%, while the other does not add because some migrants have entered without a work contract as in Table B15.

Table 817: Year of entry to Saudi Arabia by education and occupation (%).

Categories	Before 1970	1970-1974	1975	1976	1977	1978	1979	1980
(a) Education								
Illiterate	27	3	7	10	17	20	13	3
Primary	10	15	4	20	14	14	18	4
Intermediate	13	8	10	21	8	18	13	8
Secondary	2	2	5	16	11	18	33	12
Higher Institute	4	-	7	11	-	18	46	14
University	-	7	2	18	16	9	27	22
Post-graduate	-	13	-	-	-	7	80	-
(b) Occupation abroad								
Unskilled	14	11	5	13	13	18	20	5
Skilled	8	8	6	26	10	16	20	6
Clerk	7	-	7	11	7	14	36	18
Accountant	2	-	4	25	21	15	23	10
Technician	3	3	3	20	3	20	50	-
Prof. & Admin.	2	12	5	7	7	10	45	12
No job or answer	-	6	6	-	-	19	19	50
(c) Occupation at home								
Unskilled	10	10	-	13	6	28	28	5
Farmer	24	7	7	24	21	14	3	-
Skilled	8	8	10	18	11	15	26	5
Clerk	4	-	8	15	12	15	27	19
Accountant	3	3	3	21	11	16	32	13
Technicians	-	6	3	12	6	18	44	12
Prof. & Admin.	2	7	2	7	7	13	44	18
No job or answer	14	11	7	20	17	6	11	11
(d) All sample	8	7	5	16	11	15	28	10

Table B18: Intended period of migration by education and occupation abroad.

Category	Less than 5 years	5 to 10 years	More than 10 years	For ever	Finish the contract	Until conditions improve	Get saving target	Don't know yet	No. answer
(a) Education									
Illiterate	17	30	10	-	-	-	-	43	-
Primary	11	42	-	-	-	1	1	41	3
Intermediate	18	42	3	-	-	3	3	26	5
Secondary	34	30	1	-	2	5	-	20	7
H. Institute	39	32	-	-	-	-	4	21	4
University	33	18	-	2	-	2	4	31	9
Post-graduate	33	47	-	-	-	-	-	7	7
(b) Occupation abroad									
Unskilled	17	36	3	-	-	1	1	38	4
Skilled	24	40	2	-	-	2	4	28	-
Clerk	36	36	-	-	4	-	-	25	-
Accountant	29	21	2	-	2	8	2	25	11
Technician	32	39	-	-	-	-	-	25	4
Prof. & Admin.	31	31	2	2	-	2	2	26	6
No job	25	25	-	-	-	-	-	6	44
(c) All sample	25	34	2	*	*	2	2	29	6

N.B.: * indicates less than 1%.

Table B19: Work abroad suitability to past experience and qualifications (%).

Categories	very suitable	suitable to some extent	Not suitable at all	Did not state	No job
All sample	28	37	27	3	5
(1) Education					
illiterate	17	40	43	-	-
Primary	25	32	30	7	7
Intermediate	29	42	26	-	3
Higher Second.	24	43	24	2	6
Higher Inst.	43	36	18	-	4
University	31	29	27	2	11
Post-graduate	40	40	20	-	-
(2) Occupation abroad					
Unskilled	20	37	38	5	-
Skilled	40	32	28	-	-
Clerk	29	25	43	4	-
Accountant	17	54	27	2	-
Technicians	43	50	7	-	-
Prof. & Admin.	45	38	14	2	-
No job	-	-	-	-	100
(3) Way of entering Saudi Arabia					
Work contract	31	39	27	2	2
Visit or Hajj	28	38	23	5	8
Through other countries	16	32	44	-	8
Other ways	-	50	50	-	-
(4) Way of obtaining job contract					
Labour Office	21	46	27	6	-
Emp. missions	55	31	14	-	-
Private employ. agencies	60	-	40	-	-
Relatives and friends	24	42	29	1	4
Official second-ment	35	59	6	-	-
Other ways	100	-	-	-	-

N.B.: % is of the relevant category.

APPENDIX C

The Questionnaire Schedule

We would like to gather some information about migration from The Sudan to Saudi Arabia, for the purpose of a research at the University of Stirling, U.K. We would very much appreciate your help in this respect.

Your name and address do not appear in the questionnaire. The information you give will be treated in the strictest confidence, and will be used only for research purposes.

Q1: Would you please fill in the following table about yourself.

Age in completed years	Sex		Place of birth		Marital Status		No. of children	Highest level of educat.	Year of entry to S.Arabia	Last place lived in The Sudan	
	M	F	Prov.	Town or vill.	M	S				Prov.	town or village

Q.2: How many persons (including wife and children) depend on you for a major part of their life? ..... Persons

Q.3: Does your family live with you in Saudi Arabia now?

☐ Yes

☐ No

Q.4: What is the highest degree, diploma or certificate you have?

.....

Present Employment:

Q.5: Do you have a job at present?

☐ Yes

☐ No

IF YES

Q.6: (a) What is your main occupation? .....

(b) How long have you had this job?.....Years.....months

(c) In this job, are you

☐ self employed

☐ working for someone else, is it 1) Government or
2) Private

(d) Where do you work? .....

(e) is your present job:

☐ permanent

☐ casual

☐ seasonal

(f) Is this the first job you had since you came to this country, or did you change your job?

☐ first job

☐ changed my job (how many times?) ..... times

Q.7: How long did you stay before you got your 1st job?

☐ Less than a month

☐ One to two months

☐ Two to three months

☐ Three to six months

☐ More than six months.

Q.8: In what way(s) did you seek information about jobs? or How did you find the job you moved to:

Through

☐ Labour offices in The Sudan

☐ Private employment agencies

☐ Newspapers

☐ Friends and relatives

☐ employment missions
☐ chance contacts
☐ direct contacts
☐ business contacts
☐ others (specify)

Q.9: If you are presently not working (i.e. your answer to Q.5 is no)

a) How long have you been unemployed? ..... months

b) Have you ever worked since you came to this country?

☐ Yes
☐ No

c) If YES to (b) above, what was your most recent occupation?.....

Q.10: Do you think your present occupation is suitable to your qualifications and previous experience? Is it

☐ Very suitable
☐ Suitable to some extent
☐ Not suitable at all
☐ Have no job.

Previous employment in The Sudan

Q.11: Have you had a job in The Sudan before migration?

☐ Yes
☐ No

IF YES

a) What was your main occupation? .....

b) How long have you had that job? ..... Years ..... Months

c) In that job have you been

☐ self-employed
☐ working for someone else (1) government or
(2) private

d) Where have you been working? .....

(e) Did you leave your job in The Sudan:

☐ voluntary

☐ redundancy

☐ dismissal

☐ others (specify).

Q.12: IF NO (i.e. was unemployed in The Sudan)

(a) How long were you without a job? ..... months .....years

(b) You had no job in the Sudan because

☐ no job was available

☐ There was a job, but not suitable for you

☐ There was a job, but pay is little

☐ Did not look for a job

☐ Other reasons (specify)

Income in Saudi Arabia:

Q.13: Could you tell me what is your approximate income per month now? (By income we mean your net income after tax, and including bonus, overtime and/or profits) ..... Riyals/month.

Q.14: (a) Do you receive from your employer any sort of allowances that you haven't included in Q.13 above, in the form of, for example, free housing or rental allowances, transport, holiday ticket, etc.?

☐ Yes

☐ No

(b) If yes, about how much would their value amount to per month approximately? ..... Riyals/month.

Savings abroad:

Q.15: Since you migrated abroad, have you been able to accumulate any savings or reserve funds?

☐ Yes

☐ No

IF YES (a) Have you been able to save

☐ regularly

☐ occasionally

(b) How much of your monthly income do you think you save? Do you think you save

☐ less than 1/10 of your income ☐ 1/10

☐ 1/5 ☐ 1/4

☐ 1/3 ☐ 1/2

☐ 3/4 ☐ more than 3/4

Q.16: What do you intend to do with your savings?

(Please give as much information as possible)

Remittances

Q.17: Do you send any money home?

☐ Yes

☐ No

IF YES

(a) How frequent do you send money home?

☐ monthly (how much per month approx.)..... Riyals

☐ occasionally

(b) If occasionally (i) How many times a year approximately? ..... times

(ii) How much each time approximately? ..... Riyals

IF NO Why you do not send any money home? Because

- ☐ your income is not enough and there is nothing left
- ☐ you have no person in Sudan to send money to
- ☐ exchange control problems
- ☐ you have no job at present and no income
- ☐ other reasons (specify)

Q.18: How do you usually send money home? (Please tick one or more of the following)

- ☐ through the banks
- ☐ with people going home
- ☐ pay in Saudi Arabia and receive the equivalent in the Sudan
- ☐ keep in form of foreign exchange and take home later
- ☐ other way(s) (specify)

Q.19: Do you send any remittances in kind (not money cash) home?

- ☐ YES (how much per month approx.) ..... Riyals
- ☐ NO

Q.20: How much your monthly income in the Sudan was?

..... pounds/month

Q.21: (a) Do you own a house or a piece of land for a house in the Sudan?

- ☐ YES where?.....
- ☐ NO

(b) If YES, did you own this house/land before or after migrating abroad

- ☐ Before
- ☐ After

(c) How did you own this house/land?

- ☐ Government land distribution
- ☐ Emigrants housing scheme
- ☐ Buying
- ☐ Other ways (specify)

Q.22: How long do you intend to stay in Saudi Arabia?

.... years

Q.23: (a) Do you intend to go back to The Sudan finally?

☐ YES

☐ NO

(b) IF YES (i.e. you intend to go back to The Sudan) do you intend to

☐ go back to your previous job

☐ look for another paid job

☐ have your own business (what type?).....

☐ don't know yet

(c) Where do you intend to settle when you go back home?

☐ in Khartoum

☐ other large towns

☐ rural areas

☐ don't know yet

Q.24: How did you first enter this country?

☐ with a work contract

☐ came for a visit (Hajj or Omra) and stayed

☐ through other countries

☐ other ways (specify)

Q.25: If you have entered this country with a work contract, how did you obtain this work contract? From

☐ Labour Office in The Sudan

☐ Employment missions to The Sudan

☐ Private Employment Agencies

☐ Relatives and friends

☐ Official secondment

☐ Other ways (specify)

Q.26: Why did you migrate from The Sudan? Could you state for each of the following reasons, whether was very important, less important, or not important as a reason for your migration from The Sudan.

Motive	Very important	Less important	Not important
(1) High earnings in Saudi Arabia			
(2) No job available in The Sudan			
(3) Low income in The Sudan			
(4) Migration to make savings			
(5) No suitable job in The Sudan			
(6) Other reasons			

Thank you for your cooperation

BIBLIOGRAPHY

A: BOOKS

Adams, W. (ed.) (1968) "The Brain Drain" MacMillan.

Adler, S. (1977). "International Migration and Dependence" Saxone House.

Aliboni, R. (1979). "Arab Industrialization and Economic Integration" Croom Helm.

Arab Planning Institute & ILO (1978). "Seminar on Population, Employment and Migration in the Arab Gulf States" Kuwait, 16-18 Dec. 1978.

Bairock, P. (1973). "Urban Unemployment in Developing Countries" ILO.

Bhagwati, J.N. (1976). "The Brain Drain and Taxation: Theory and Empirical Analysis" North Holland.

Birks, J.S. & Sinclair, C.A. (1980). "International Migration and Development in the Arab Region", ILO, Geneva.

———,——— (1980). "Arab Manpower: The Crises of Development" Croom Helm, London.

Blaug, M. (1973). "Education and the Employment Problem in the Developing Countries" ILO, 3rd impression, 1978.

Bohning, W.R. (1972). "The Migration of workers in the U.K. and the European Community" OUP.

Castle, S. & Kosack, G. (1973). "Immigrant workers and class structure in West Europe" OUP.

El-Hassan, A.M. (ed.) (1976). "Growth, Employment and Equity: A selection of papers presented to the ILO Mission to The Sudan 1974-75" ILO, in collaboration with ESRC, Khartoum University Press, Khartoum.

———(ed.) (1976). "An Introduction to The Sudan Economy" Khartoum University Press, Khartoum.

Farley, R. (1971). "Planning for Development in Libya: The Exceptional Economy in the Developing World" Preager.

Friedlander, S.L. (1965). "Labour migration and economic growth; A case study of Puerto Rico" MIT Press.

Galaleldin, M.E. (1973). "Internal Migration in The Sudan since World War II, with special reference to migration to Greater Khartoum". Unpublished Ph.D. Thesis, University of London.

————(1979). "External Migration in The Sudan" ESRC, Khartoum, Dec. 1979 (Arabic).

Galbraith, J.K. (1979). "The Nature of Mass Poverty" Penguin.

Gorden, R.L. (1969). "Interviewing: Strategy, Techniques and Tactics" The Dorsey Press, Homewood, Illinois.

Hiemenz, U. & Schultz, K.W. (1979). "Trade in Place of Migration" ILO, Geneva.

ILO (1976). "Growth, Employment and Equity: A Comprehensive Strategy for The Sudan" 2nd ed. 1978, ILO, Geneva.

————(1976). "Manpower and Employment in the Arab Countries: Some Critical Issues" ILO, Geneva.

————(1979). "Manpower assessment and planning projects in the Arab region: current issues and prospectives" ILO, Geneva.

Johnston, J. (1963). "Econometric Methods" McGraw-Hill.

Jones, C. (1977). "Immigration and Social Policy in Britain" Tavistock Publications, London.

Kannappan, S. (ed.) (1977). "Studies of Urban Labour Market Behaviour in Developing Areas" IILS, Geneva.

Kiker, B.F. (ed.) (1971). "Investment in Human Capital" University of South Carolina Press, Columbia.

Kindleberger, C.P. (1967). "Europe's Postwar Growth and the Role of Labour Supply", OUP, Oxford.

Kmenta, J. (1971). "Elements of Econometrics" MacMillan.

Maddalla, G.S. (1977). "Econometrics" McGraw-Hill.

Mansfield, P. (ed.) (1980). "The Middle East: a Political and Economic Survey" OUP, 5th ed., 1980.

Oppenheim, A.N. (1966). "Questionnaire Design and Attitude Measurement" Heinemann.

Paine, S. (1974). "Exporting Workers: The Turkish Case" C.U.P., Cambridge.

Raj, D. (1972). "The design of sample surveys" McGraw-Hill.

Richardson, S.A. et al. (1965). "Interviewing: its Forms and Functions" Basic Books, Inc., London.

Ridker, R. & Lubell, H. (1971). "Employment and Unemployment Problems of the Near East and South Asia" Vols. I and II, Vikas Publications, Delhi, India.

Ritterband, P. (1978). "Education, Employment and Migration: Israel in Comparative Perspective" C.U.P.

Sayigh, Y.A. (1978). "The Economics of the Arab World" Croom Helm.

Sen, A.K. (1975). "Employment, Technology and Development" ILO.

Stewart, J. (1976). "Understanding Econometrics" Hutchinson & Co. Ltd., London.

Sudman, S. (1976). "Applied Sampling" Academic Press.

Swanson, J.C. (1979). "Emigration and Economic Development: The Case of The Yemen Arab Republic" Westview Press, Colorado.

Sylvester, A. (1977). "Sudan under Nimeiri" Bodley Head, London.

Thomas, B. (1954). "Migration and Economic Growth; A Study of Great Britain and the Atlantic Economy" C.U.P.

Trebous, M. (1970). "Migration and Development: The Case of Algeria" Development Studies Centre, OECD, Paris.

Turnham, D. (1971). "The Employment problem in Less Developed Countries" OECD.

United Nations, Dept. of Social Affairs, Population Division (1953). "The Determinants and Consequences of Population Trends" Population Study No.17, N.Y. 1953.

————(1973). "The Determinants and Consequences of Population Trends: New Summary of Findings on Interaction of Demographic, Economic and Social Factors" Vol. 1, Population Studies No.50, N.Y. 1973.

Weisberg, H.F. & Bowen, B.D. (1977). "An Introduction to Survey Research and Data Analysis" W.H. Freeman & Co. San Francisco.

Willis, K.G. (1974). "Problems in Migration Analysis" Saxone House.

B. PAPERS

Abdalla, A.A. (1980). "Foreign labour in Yemen Arab Republic: The case of Sudanese migrants" ESRC, Bulletin No.84, Khartoum, Feb. 1980.

Abramovitz, M. (1960). "The nature and significance of Kuznet's cycles" Eco. Develop. & Cult. Change, Vol. 9, 1960-61, 225-248.

Abu-Lughod, J. (1978). "Recent migrations in the Arab World" in W.H. McNeil & R.S. Adams (eds.) "Human Migrations: Patterns and Policies" Bloomington, Indiana University Press, Indiana, 1978.

Addo, N.O. (1974). "Foreign African workers in Ghana" ILR, 109(1), Jan. 1974, 47-68.

Ahmed, A.S. (1980). "The manpower situation in The Sudan" Labour and Society 5(3), 1980, 291-308.

Ahmed, F. (1976). "Pakistan: the new dependence" Race and Class, XVIII,(1), Summer 1976, 3-21.

Ali, A.A. (1976). "A note on the brain drain in The Sudan" ESRC Bulletin No.49, Khartoum, Dec. 1976.

Alpat, S. (1971). "The effect of Turkish workers going abroad on the labour force" in R.G. Ridker & H. Lubell (eds.) "Employment and Unemployment Problems ...".

Azzam, H.T. (1978). "Labour migration in the Arab region: A structural analysis" in Arab Planning Institute & ILO (eds.) "Seminar on population ..." p.492-465.

Barbour, K.M. (1980). "The Sudan since Independence" Jou. of Modern African Stud., 18 (1) March 1980, 73-97.

Barkin, S., (1967). "The economic costs and benefits and human gains and disadvantages of international migration" Jou. of Human Resources, 2 (4), Fall 1967, 495-516.

Baucic, I. (1972). "The effects of emigration from Yugoslavia and the problems of returning emigrant workers" European Demographic Monograph II, Martinus, Nijhoff/The Hague, Netherlands.

Beals, R.E., M.B. Levy & L.N. Moses (1967). "Rationality and migration in Ghana" Rev. of Eco. & Stat., 49, 1967, 480-486.

Benoune, M. (1971). "Maghribin workers in France" Race and Class, XVII (1), 1971.

Bequele, A. (1975). "The employment situation in Africa" JASPA Working Papers, Addis Ababa, 1975.

Berkoff, D. & Adams, A. (1979). "Which way Sudan agriculture" Eco. Develop. & Cult. Change, 28 (1), Oct. 1979.

Berouti, J. (1976). "Employment promotion in the Arab countries" ILR, Sept./Oct. 1976.

Berry, R.A. & Soligo, R. (1969). "Some welfare aspects of international migration" JPE, 77(5), Sept./Oct. 1969, 778-794.

Beshir, M.O. (1977). "Educational policy and employment problem in The Sudan" Monograph 3, DSRC, May 1977.

Bhagwati, J.N. (1979). "International migration of highly skilled: economics, ethics and taxes" 3rd World Quert. 1(3), July 1979, 17-30.

Bhagwati, J.N. & C. Rodriguez (1975). "Welfare theoretical analysis of the brain drain" Jou. of Develop. Eco. 2(3), Sept. 1975, 195-221.

Birks, J.S. & Sinclair, C.A. (1978). "International migration project, country case study: The Democratic Republic of The Sudan" Dept. of Economics, Univ. of Durham, March 1978.

————(1979). "International labour migration in the Middle East" 3rd World Quert. 1(2), April 1979, 87-99.

————(1979). "Migration and development: The changing perspective of the poor Arab countries" Jou. of International Affairs, 33(2), 1979.

————(1979). "Some aspects of labour market in the Middle East" Jou. of Developing Areas, 13, 1979.

Bohning, W.R. (1975). "Some thoughts on emigration from the Mediterranean Basin" ILR, 111(3), March 1975, 251-277.

————(1978). "Perspectives of Arab countries on international migration" in Arab Planning Institute & ILO" "Seminar on population ...."

Bouhdiba (1979). "Arab migrations" in Aliboni R. (ed.). "Arab Industrialization ..."

Carnoy, M. (1967). "Aspects of labour force mobility in Latin America" Jou. of Human Resources, 2(4), Fall 1967, 517-537.

Cerase, F.P. (1976). "Migration and social change: Expectations and reality: a case study of return migration from U.S. to Southern Italy" IMR, 8(2), 245-262.

Chandavarker, A.G. (1980). "The use of migrants remittances in labour exporting countries" Finance and Development, 17(2), June 1980.

Chapin, G.L., Vedder, R.K. & Gallaway, L.E. (1970). "The determinants of migration to South Africa, 1950-1967" South African Jou. of Eco., XXXVII, Dec. 1970, 374-81.

Choucri, N. (1977). "The new migration in the Middle East: A problem for whom?" IMR, 11(4), Winter 1977, 421-443.

Cochrane, D. & Orcutt, G.H. (1949). "Application of least squares regression to relationships containing auto-correlated error terms" Jou. of American Stat. Assoc., March 1949, 32-61.

Dip, G. (1979). "Migration and naturalization laws in Egypt, Lebanon, Syria, Jordan, Kuwait and UAE; Part I: Migration laws and Part II: Naturalization laws". Pop. Bulletin of ECWA, No.15, August 1978, 33-64 and No.16, June 1979, 3-18, respectively.

Dutta, A. (1972). "An econometric study of Indo-Ceylond labour migration 1920-1938: A critique" Eco. Develop. & Cult. Change 21(1) Oct. 1972, 142-156.

Easterlin, R.A. (1960). "Influences in European Overseas emigration before World War I" Eco. Develop. & Cult. Change 9(3), April 1961, 331-35.

Easton, S.T. (1981). "More on the emigration of the peasantry" World Development, 9(3), March 1981, 315-318.

Ecevit, Z.H. (1979). "International labour migration in the Middle East and North Africa - Trends, Effects and Policies" Paper presented to the Rockefeller Foundation Conference on International Migration, Bellagio, Italy, June 1979.

Ecevit, Z.H. and Zacharia, K.C. (1978). "International Labour Migration" Finance and Development, 15(4), Dec. 1978.

Edens, P.G. and Snavely, W.P. (1970). "Planning for development in Saudi Arabia" The Middle East Jou. 24, Winter 1970.

Edwards, E. (1974). "Employment in developing countries" World Development 2 (7), July 1974, 1-28.

Eldridge, R.H. (1966). "Emigration and the Turkish balance of payments" The Middle East Jou. 20, 1966.

Emile, A.N. (1977). "Labour markets and citizenship in Bahrain and Qatar" The Middle East Jou. 31, 1977, 143-156.

Farrag, A.M. (1974). "Manpower situation in the Arab region and future needs" Pop. Bulletin of ECWA, No.4, July 1974.

————(1976). "Migration between Arab countries" in ILO (ed.) "Manpower and employment ...".

Fleisher, B.H. (1963). "Some economic aspects of Puerto-Rican migration to the U.S.A." Rev. of Eco. & Stat. XLV, 1963, 245-253.

Galaleldin, M.E. (1978). "A preliminary note on Sudanese emigration to oil-rich countries" Sudan Jou. of Eco. and Soci. Sciences, 2(2), notes and reports, 1978, 55-59.

Gallaway, F.E. & Vedder, R.K. (1971). "Emigration from U.K. to the U.S.A., 1860-1913" Jou. of Eco. Hist. Dec. 1971, 885-897.

Gerakis, A.S. & Thayanithy, S. (1978). "Wave of Middle East migration raises questions of policy in many countries" IMF Survey, 7(17), Sept. 4, 1979, 260-262.

Gillespie, F. and Browing, H. (1979). "The effect of emigration upon socio-economic structure: the case of Paraguay" IMR 13(3), Fall 1979, 502-516.

Ginneken, W.V. (1975). "The regional and rural-urban income distribution in The Sudan" World Employment Programme Research, Income Distribution and Employment, Working Paper 14, ILO, March 1975.

Girling, R.K. (1974). "The migration of human capital from the 3rd World: The implications and some data on the Jamaican case" Social and Eco. Studies, 23(1), March 1974, 84-96.

Gonzalez (1968). "The migration of Latin American High Level Manpower" ILR, 98(6), Dec. 1968, 551-569.

Graves, P.E. (1979). "Income and migration reconsidered" Jou. of Human Resources XIV (1), winter 1979, 112-119.

Griffin, K. (1976). "On the emigration of peasantry" World Development, 4(5), 1976, 353-361.

Griliches, Z. (1961). "A note on serial correlation bias in estimates of distributed lags" Econometrica XXIX, June 1961, 65-73.

Grubel, H.H. & Scott, A.D. (1966). "The international flow of human capital" American Eco. Rev. 56, 1966, 268-274.

Gupta, (1973). "Outflow of high level manpower from Philippines, with special reference to the period 1965-71" ILR 107(2) Feb. 1973, 167-191.

Hadley, L.H. (1977). "The migration of Egyptian human capital to Arab oil producing states: A cost-benefit analysis" IMR, XI(3), Fall 1977, 285-300.

Haenszel, W. (1967). "Concept, measurement and data in migration analysis" Demography 1967, 253-261.

Halliday, F. (1977). "Migration and labour force in oil producing states of the Middle East" Development and Change, 8, Summer 1977, 263-292.

Hill, A. (1977). "The demography of the population of Kuwait" Pop. Bulletin of ECWA, No.13, July 1977.

Hitti, S.H. & Abed, G.T. (1974). "The economy and finance of Saudi Arabia" IMF Staff papers XXI(2), July 1974, 247-306.

Hume, M. (1973). "Migrant workers in Europe" Finance and Development 10(1), 1973, 2-6.

Jenkins, J.C. (1977). "Push/pull in recent Mexican migration to the USA" IMR, 11(2), summer 1977, 178-189.

————(1978). "The demand for immigrant workers: labour scarcity or social control" IMR, 12(4), winter 1978, 514-532.

Johnson, G.E. & Whitelaw, W.E. (1974). "Urban-rural income transfers in Kenya: An estimated remittance function" Eco. Develop. & Cult. Change 22(3) April 1974, 473-479.

Johnson, H. (1967). "Some aspects of brain drain" Pakistan Development Review, 1967.

Kade, G. & Schiller, G. (1972). "Foreign workers: Development aid by LDCs" Intereconomics 1, 1972.

Kaikati, J. (1980). "The economy of Sudan: A potential breadbasket of the Arab World" International Jou. of Middle East Studies, London, 11(1), Feb. (1980), 99-123.

Kannappan, S. (1968). "The brain drain and developing countries" ILR 98(1), July 1968, 1-26.

————(1977). "Urban labour market structure and employment issues in The Sudan" in Kannappan (ed.) "Studies of urban labour market ...".

Kao, C.H.C. & Jae Won Lee (1973). "An empirical analysis of China's brain drain to USA" Eco. Develop. and Cult. Change 21(3), April 1973, 500-513.

Kelley, A.C. (1965). "The international migration and economic growth: Australia 1865-1935" Jou. of Eco. Hist. XXV (3), Sept. 1965, 333-351.

Kindleberger, C.P. (1965). "Emigration and economic growth" Banca Nationale Del Lavoro Quarterly Review XVIII Sept. 1965, 235-254.

Kisa, J.J. (1975). "Issues and problems in employment promotion in Africa" JASPA Working Papers, Addis Ababa, 1975.

Levy, M.B. & Wadycki, W.J. (1974). "What is the opportunity - cost of moving? Reconstruction of the effects of distance on migration" Eco. Develop. & Cult. Change 22(2), Jan. 1974, 198-214.

Lewis, W.A. (1954). "Economic development with unlimited supplies of labour" The Manchester School of Eco. & Soc. Stud. May 1954.

Lutz, V.C. (1961). "Some structural aspects of the Southern problem". Banca Nationale Del Lavoro Quarterly Rev. XIV, 1961, 367-402.

Mabro, R.E. (1976). "Employment, choice of technology and sectoral priorities" in ILO (ed.) "Manpower and employment ...".

McLoughlin, P.F.M. (1976). "Labour market conditions and wages in the Three Towns, 1900-1950" Sudan Notes and Records 1976, 105-118.

Magnussen, O. & Siqueland, G. (1978). "Migration from Norway to the USA, 1866-1914: The use of econometric methods in analysing historical data". The Scandinavian Jour. of Eco., 80(1), April 1978, 34-52.

Marr, W.L. (1977). "The UK's international migration in the interwar period: Theoretical considerations and empirical testing" Population Studies, a Jou. of Demography, 31(3), Nov. 1977, 571-579.

Martin, P.L. & Houston, M.F. (1979). "The future of international labour migration" Jou. of International Affairs, 33(2), Fall/Winter 1979, 311-333.

Metwally, M.M. & Tamaschke, H.U. (1980). "Oil exports and economic growth in the Middle East" Kyklos, 33(3), 1980, 499-521.

Michalopoulos, C. (1968). "Labour migration and optimum population" Kyklos, 21(1), 1968, 130-145.

Miracle, M.P. & Berry, S.S. (1970). "Migrant labour and economic development" OEP, 22(1), March 1970, 86-108.

Mulat, T. (1975). "Educated unemployment in the Sudan". World Employment Programme Research: Education and Employment Working Paper No.5, ILO, 1975.

Mustafa, M.E. (1980). "Development planning and international migration in The Sudan" Labour and Society 5(1), Jan. 1980, 85-98.

————and Affan, K. (1976). "The Sudanese labour market: An overreview of its characteristics and problems, with special emphasis to the urban labour market" in El-Hassan (ed.) "Growth, employment and equity ...".

Nashashibi, K. (1980). "A supply framework for exchange reform in developing countries: The experience of the Sudan" IMF Staff Papers, 27(1), March 1980.

Nelson, P. (1959). "Migration, real income and information". Jou. of Regional Science, Spring 1959.

Nigam, S. (1975). "Some notes on labour force, employment and unemployment situation in The Sudan" JASPA Working Papers, Addis Ababa, 1975.

————(1975). "Some observations on government's policy as an employer of the last resort" JASPA Working Papers, Addis Ababa, 1975.

————(1975). "The labour requirement and supply situation in agriculture in The Sudan 1975-85" JASPA Working Papers, Addis Ababa, 1975.

————(1975). "Skilled manpower situation in The Sudan 1975-85, and policy implications" JASPA Working Papers, Addis Ababa, 1975.

Nikolic, M. (1972). "Some basic features of Yugoslav external migration" Yugoslav Survey, 13(1), Feb. 1972.

————(1972). "Skilled labour temporarily employed abroad" Yugoslav Survey, 13(4), Nov. 1972.

Nimeri, S. (1977). "The 5-year plan 1970-75; some aspects of the plan and its performance" Monograph No.1, DSRC, 1977.

Oberai, A.S. (1975). "An analysis of migration to Greater Khartoum (Sudan)" World Employment Programme Research, Population and Employment Working Paper No.19, July 1975, ILO, Geneva.

———(1977). "Migration, unemployment and the urban labour market: a case study of the Sudan" ILR, 115(2), March 1977, 211-223.

OECD, Development Centre (1979). "Economic consequences of migration from North Africa" Development Digest, SVII (4), Dec. 1979, 104-115.

Orsagh, T.J. & Mooney, P.J. (1970). "A model for the dispersion of the migrant labour force and some results for the USA, 1880-1920" Rev. of Eco. Stat. 52, 1970, 306-312.

Oterza, E. (1965). "Emigration of engineers from Argentina: A case of Latin American brain drain" ILR, 92, Dec. 1965, 445-461.

Palmer, R.W. (1974). "A decade of West Indian migration to USA, 1962-1972: An economic analysis" Social and Eco. Studies, 23(4), Dec. 1974.

Perwaize, S. (1979). "Home remittances" a special report, Pakistan Economist, Sept. 1979.

Petruccelli, J.L. (1979). "Consequences of Uruguayan emigration: a research note" IMR, 13(3), Fall 1979, 519-525.

Pope, D. (1968). "Empire migration to Canada, Australia, New Zealand, 1910-1920" Australian Eco. Papers, 3, Dec. 1968, 167-188.

Poulson, B. & Wallace, M. (1979). "Regional integration in The Middle East: The evidence of trade and capital flows" Middle East Jou. 33(4), Winter 1979, 464-478.

Quigley, J.M. (1972). "An economic model of Swedish emigration" Quarterly Jou. of Eco., 86, Feb. 1972, 111-126.

Raimon, R.L. (1962). "Interstate migration and wage theory" Rev. of Eco. & Stat. XLV, Nov. 1962, 428-438.

Rembel, H. & Lobdell, R.A. (1978). "The role of urban to rural remittances in rural development" Jou. of Develop. Studies, 14(3), April 1978, 224-241.

Richardson, H.W. (1972). "British emigration and overseas investment 1870-1914" Eco. Hist. Rev., 25, 1972, 99-113.

Roa, P. & Griliches, I. (1969). "Small sample properties of several two-stage regression methods in the context of autocorrelated errors" Jou. of Amer. Stat. Assoc., 64, 1969, 253-272.

Robinson, H. (1971). "Survey method and questionnaire design" Housing and Labour Mobility Paper No.3, Dept. of Geography, Univ. College of London, 1971.

Salowsky (1973). "The economic impact of foreign labour" Intereconomics, Feb. 1973.

Sanyal, M.B. & Verslusis, J. (1976). "Higher education, human capital and labour market segmentation in The Sudan" Education, Employment, Manpower Planning and Labour Market Information, Working Paper No.10, World Employment Programme Research, ILO, Geneva 1976.

Sassen-Kook, S. (1980). "The internationalization of labour force" Studies in Comparative International Development XV(4), Winter 1980.

Savin, N.E. & White, K.J. (1977). "The Durbin-Watson test for several correlations with extreme sample size or many regressors" Econometrica, 45(8), Nov. 1977, 1989-1995.

Schiller, G. (1975). "Channelling migration; a review of policy" ILR, 111(4), April 1975, 335-355.

Schultz, T.W. (1961). "Investment in human capital" Amer. Eco. Review, 51, 1961.

Shaw, R.P. (1979). "Migration and employment in the Arab World: Construction as a key policy variable" ILR, 118(5), Sept./Oct. 1979, 589-605.

————(1981). "Manpower and educational shortages in the Arab World: An interim strategy" World Development, 9(7), July 1981, 637-655.

Simmons, J.C. (1970). "Trends in the theoretical treatment of labour mobility" Jou. of Eco. Studies, 5(1), Dec. 1970.

Sjaastad, L. (1962). "The cost and returns of human migration" JPE, 70(2), Oct. 1962, 80-93.

Socknat, J.A. & Sinclair, C.A. (1978). "International migration project: migration for employment abroad and its impact on development in the Yemen Arab Republic" Dept. of Economics, Univ. of Durham, July 1978.

Songre, A. (1973). "Mass emigration from Upper Vota: the effects and implications" ILR 108 (2-3), Aug/Sept. 1973, 209-225.

Stark, O. (1980). "On the role of urban to rural remittances in rural development" Jou. of Develop. Studies, 16(3), April 1980, 369-374.

Swanson, J.C. (1979). "Some economic consequences of emigration for rural economic development in the Yemen Arab Republic" The Middle East Jou. 33, 1979, 34-43.

Todaro, M.P. (1969). "A model of labour migration and urban unemployment in LDCs" Amer. Eco. Review 59, 1969, 138-148.

Tomaske, Y.A. (1971). "The determinants of inter-country differences in European migration 1881-1900". The Jou. of Eco. Hist., 31, Dec. 1971, 840-853.

Tuma, E.H. (1980). "The rich and poor in the Middle East" Middle East Jou., 34, Autumn 1980, 413-437.

Udall, A.T. (1976). "The effects of rapid increases in labour supply on services employment in developing countries" Eco. Develop. & Cult. Change 24(4), July 1976, 765-785.

Watanabe (1969). "The brain drain from developing countries to developed countries" ILR 99, April 1969, 401-433.

Waters, A.R. (1973). "Migration, remittances and the cash constraints in African small holder's economic development" OEP, 25(3), Nov. 1973, 435-454.

Wilkinson, M. (1970). "European migration to USA: An econometric analysis of aggregate supply and demand" Rev. of Eco. & Stat., 52, Aug. 1970, 272-279.

Williamson, J.G. (1974). "Migration to the New World: Long-term influences and impact" Exploration in Eco. Hist. 11(4), Summer 1974, 357-389.

Zahlan, A. (1979). "The Arab brain drain" Pop. Bulletin of ECWA, No.16, June 1979, 19-38.

Zolotas, X. (1966). "International migration and economic development, with special reference to Greece" Bank of Greece, Papers and Lectures, 21, 1966.

C. GOVERNMENT PUBLICATIONS

The Democratic Republic of the Sudan:

Bank of Sudan "Annual Report" 1970-1979.

Ministry of Agriculture: Statistical Division "Bulletin of agricultural statistics of The Sudan 1969/70." Khartoum.

Ministry of Agriculture: Statistical Division "Yearbook of Agricultural Statistics" Khartoum 1974.

Ministry of Education: Statistical Division "Higher Education Statistics Yearbook 1977/78" Khartoum.

————"Yearbook of Educational Statistics 1976/77" Khartoum 1977.

Ministry of Finance and National Economy: Economic Research Unit" Economic Survey" 1967/68 - 1978/79.

Ministry of National Planning "The 10-Year Plan of Economic and Social Development of the Sudan 1961/62 - 1970/71" Economic Planning Secretariat, Khartoum 1962.

————"The 5-Year Plan of Economic and Social Development of the D.R. of The Sudan for the period 1970/71 - 1974/75" Khartoum 1970.

————"The Six-Year Plan of Economic and Social Development of the D.R. of The Sudan 1977/78 - 1982/83" Vol. I and Vol. II, Khartoum, April 1977.

Ministry of National Planning, Dept. of Statistics "First population census of The Sudan 1955/56" Final report, Vol. 2, Khartoum 1966.

————"Agricultural census 1964/65" Khartoum 1966.

————"Population and Housing Survey: general survey of urban areas" Khartoum 1968.

————"Household Budget Survey in The Sudan 1968: patterns of income distribution" Khartoum 1970.

————"Industrial survey 1969/70" Khartoum, Dec. 1970.

————"National income accounts and supporting tables" National Income Division, Khartoum 1974.

————"Statistical Yearbook 1973" Khartoum.

Ministry of National Planning, Dept. of Statistics "Internal trade statistics and price indices 1973-75" Khartoum 1976.

————"1973 population census of The Sudan: Provisional results" Khartoum 1976.

Ministry of Public Services and Administrative Reform: Dept. of Labour "Annual Report" Khartoum, 1975/76 and 1977/78.

————"Sudanese working in Arab countries" Paper presented to the SSU Symposium on Migration in The Sudan, 1978 (mimo in Arabic).

————Dept. of Labour "A study of those leaving work without permission or previous notification" Khartoum, June 1979, (mimo in Arabic).

————"The private sector establishments survey in establishments employing 10 or more employees" 1975 published in July 1976, and 1978 published in July 1979, Khartoum.

Sudanese Socialist Union (SSU) "Phased programme of action" Preparatory Central Committee, Khartoum 1972 (arabic).

————"Proceedings of a symposium on migration in the Sudan held on 27-30 Dec. 1978 "Khartoum 1979.

Kingdom of Saudi Arabia: Ministry of Finance and National Economy, Central Dept. of Statistics "The statistical indicators" 3rd issue, Riyadh, 1978.

————"Employment and wage levels in privately owned establishments" Riyadh, July 1977.

————"Statistical Yearbook" Riyadh, 1978.

Libyan Arab Jamaheria: Central Bank of Libya "Demographic comparison of important financial and economic indicators in the Arab world" Eco. Bulletin of the Central Bank May-June 1977, p.33-35.

D. NEWSPAPERS AND MAGAZINES

Al-Arabi Magazine "Arab immigration to the Gulf" issue No.224, 1979, p.54-60, Kuwait.

Al-Ayam Newspaper "More than 4000 have migrated ... and another 13 thousands are about to ..." Khartoum, 16 Nov. 1977.

————"Migration of Sudanese brain and the evaluation of the diplomas ..." Khartoum, 19 Nov. 1978.

————"The National Symposium on Migration" Khartoum, 10 Jan. 1979.

————"The phenomenon of migration" Khartoum, 1 July 1979.

Al-Sahafa Newspaper "Emigration, its causes and impacts" Khartoum, 10 Dec. 1979.

————"Migration problems" Khartoum, 8 March 1980.

Al-Sudani Al-Mughtarib (Sudanese Migrant) "The role of emigrants in development" Issue No.2, Khartoum, June 1980.

The Financial Times "Survey of Arab Construction" Tuesday, Jan. 22, 1980.

————"Survey of Kuwait" Monday, Feb. 25, 1980 and Wednesday Feb. 25, 1981.

————"Survey of UAE" Monday June 23, 1980.

————"Survey of Saudi Arabia" Tuesday May 5, 1981.

————"Survey of Arab industrialization" Thursday, Dec. 17, 1981.

Mujalat Al-Sharq Al-Awsat (Middle East Magazine) "Migration and manpower resources in the Gulf States" Issue No.4, 1977, p.46-61.

Sudanow Magazine "The brain drain" Khartoum, Dec. 1976.

————"JECS; too much; too little, too late" Khartoum, Sept. 1979.

————"Finding the right balance: exchange changes" Oct. 1979.

————"Chemical engineers: surplus to requirements?" Jan. 1980.

————"Brain drain: leaving home" Jan. 1981.

————"Interview: Badr el Din Suleiman, Finance Minister" July 1981.

————"Licensing foreign currency dealers: Black market blues fade" August 1981.

Sudan Standard "The emigration of Sudanese skills, and its influence on the 6-year plan" Khartoum, April 8th and 12th, 1978.

Suna (Sudan News Agency) Weekly Review "Brain drain in The Sudan" Issue No.361, Khartoum p.9-12.

————"A fearful outflow" Issue No.358, Khartoum, p.7-12.

————"Supplement to Suna investigations "Migration of brain and experts" Khartoum, April 23, 1978.

————"The migration of engineers" Dec. 2, 1979.

The Times "Special Report on the Republic of the Sudan" London, Tuesday, Jan. 10th, 1978.

E. OTHERS

Europa Publications "The Middle East and North Africa" different years.

ILO "Social and Labour Bulletin" No.4, Dec. 1980.

ILO "Yearbook of Labour Statistics" 1979.

IMF "Balance of Payments Yearbook" 1980.

IMF "International Financial Statistics Yearbook" 1980.

OECD "Latest information on national accounts of developing countries" OECD, Development Centre, 1980.

The Royal Institute of International Affairs "The Middle East, a political and economic survey" Different years.

World Bank "Annual Report" 1980, 1981.

————"World Development Report" 1980.

————"World Bank Population Atlas" 1973-1980.

————"World Tables" John Hopkins Univ. Press, 1980.

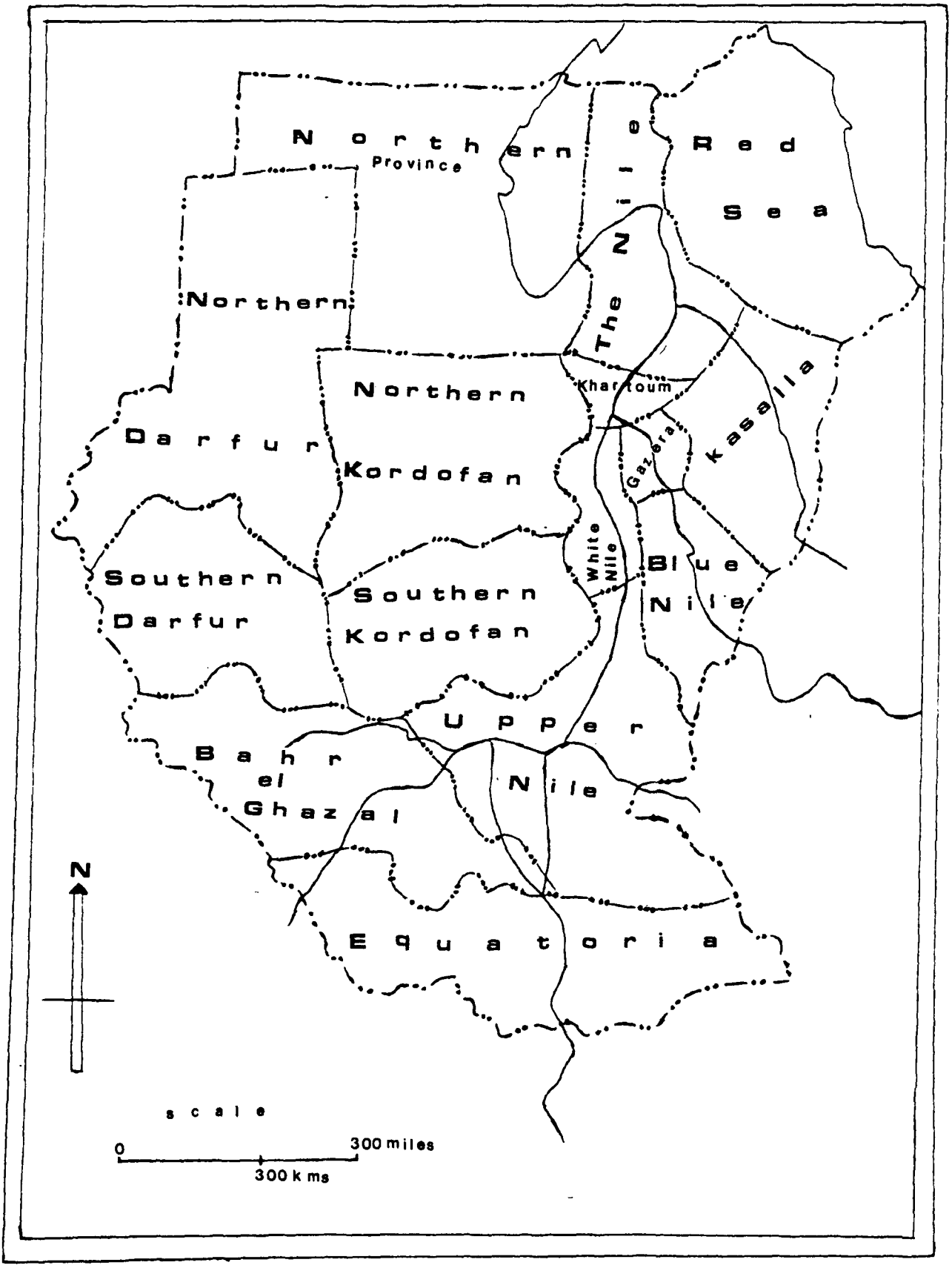
UNESCO "Statistical Yearbook" 1978-1979.

UN "Demographic Yearbook" 1980 and different years.

————"Yearbook of National Account Statistics" 1979 and others.

map 1

THE SUDAN: PROVINCES



map 2: THE MIDDLE EAST AND NORT AFRICA